



**Pipeline and Hazardous Materials Safety Administration  
Office of Pipeline Safety**

**Gas Integrity Management  
Inspection Manual**

**Inspection Protocols  
with Results Forms**

**January 1, 2008**

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## Explanation of Protocol Format

Each protocol element will have top-tier protocols that address the high level requirements. The regulatory requirement upon which the protocol is based is contained in brackets; e.g., [§192.905(a)]

Each top-tier protocol will have detailed "sub-tier" protocols which collectively lead the inspector to draw overall conclusions about compliance with the top-tier protocol. The regulatory requirement, upon which each sub-tier protocol is based, is also contained in brackets.

Notes on protocols:

- The typical sentence structure used in the protocols follows the form of "Verify that [describe the requirement]." The use and meaning of the term "verify" is expanded upon below.
- PHMSA will "verify" an operator's compliance status with respect to each requirement. In order to perform this verification, PHMSA will inspect the operator's documented processes and procedures in order to determine if a program has been established that complies with rule requirements. In addition, PHMSA will inspect an operator's implementation records to determine if the operator is effectively implementing its programs and processes. The purpose of the PHMSA verification/inspection is not to perform a quality check of every integrity related activity. The PHMSA inspection is conducted in the form of an audit. As a result, the PHMSA inspection will typically perform an inspection of selected operator records sufficient in breadth and depth to give the inspection team adequate understanding regarding the degree of an operator's commitment to compliance with applicable requirements and/or the degree to which the operator's program has been effective with respect to achieving compliance. PHMSA may use any number of inspection or audit techniques to identify potential compliance issues. Program documents may be inspected to determine if adequate processes have been developed and documented to the degree necessary for competent professionals to understand and effectively implement the process with results that are consistent and repeatable. For example, one technique that might be used by the inspection team is a "vertical slice" in which a specific covered segment or pipeline system is selected to perform a detailed inspection of every aspect of integrity management, thus following a specific example through the entire process of integrity management. Based on those reviews, PHMSA will identify potential non-compliances with rule requirements. PHMSA can not and will not certify nor conclude that an operator is in full compliance with rule requirements, even if the inspection does not identify any areas of non-compliance. Operators are wholly responsible for compliance with regulations.
- References to regulatory requirements may include references to specific rule sections/paragraphs and/or to industry standards that are invoked in the rule. As specified in §192.7, any requirement invoked by reference is a requirement of the rule as though it were set out in full in the regulation.
- Protocols are subject to change without notice.
- Protocols are an initial guide for use by PHMSA inspectors during Integrity Management inspections. Inspectors will develop additional questioning during the course of the inspection to investigate the specifics of an operator's program. Protocols are not to be construed as an exhaustive list of questions that may be presented to operators during an inspection.
- Protocols are made publicly available as a courtesy to operators as they develop their Integrity Management program, as well as other stakeholders.

## Operator Contact and System Information

### *Operator Information:*

Name of Operator (legal entity):	Ameren Illinois
Headquarters Address:	300 Liberty Peoria, Illinois 61602
Company Official:	Carey Phelps, Supervising Engineer Gas Technical Engineering
Phone Number:	217-424-9652
FAX Number:	217-424-6530
PHMSA Operator ID:	332513

### *Persons Interviewed:*

<b>Persons Interviewed</b> <i>(list primary contact first)</i>	<b>Title</b>	<b>Phone Number</b>	<b>Email</b>
Carey Phelps	Supervising Engineer Gas Tech Engineering	217-424-6952	cphelps3@ameren.com
Bob Roth	Sr. Quality Assurance Consultant	217-778-0785	rroth2@ameren.com
Matthew Anderson	Pipeline Integrity Specialist	217-424-6921	MAnderson@ameren.com

### *PHMSA and State Representatives:*

<b>Inspector Name</b>	<b>Office/Organization</b>	<b>Days Present</b>
James Watts	Illinois Commerce Commission	3
Aaron McElvray	Illinois Commerce Commission	3

### *System Description:*

<b>Operator ID</b>	<b>System Name and Brief Description</b>	<b>States</b>	<b>InTRA/Inter</b>	<b>Fed. Insp. Jurisdiction</b>
32513	Ameren Illinois	Illinois	InTRA	No

**System Description Narrative:** Ameren Illinois operates approximately 1247.6 miles of coated and cathodically protected transmission piping in the State of Illinois. Piping diameter ranges from 2 inches to 30 inches. Ameren has approximately 837.3 miles of piping located in Class one locations, 158.9 miles in class 2 locations and 251.4 miles in Class 3 locations. There is no transmission piping currently in class four locations within the Ameren Illinois service territory. Ameren reported in 2011 there was approximately 82.1 miles of transmission piping located in High Consequence Area 's. The base line inspection plan reviewed during the audit was current and indicates as of

*mid December of 2012, Ameren has surveyed 84.15 miles of transmission piping located in HCA's between 2004 and 2012. There is new piping in the system that has not been surveyed but is in the baseline plan and is scheduled for inspection in 2013 and 2015 and will meet the 10 year requirement for completing a baseline. The new piping is Transmission pipe that was replaced in the Johnston City to Benton area and was pressure tested in 2011. This piping is scheduled for the baseline assessment in 2013. Ameren is planning to perform ECDA on this segment to establish the baseline and is being used to identify any possible coating issues resulting from construction and pipe handling. At the present time Ameren is completing the assessment of the remaining casings in the Transmission System that has not been assessed.*

## Protocol Area A. Identify HCAs

- [A.01](#) Program Requirements
- [A.02](#) Potential Impact Radius
- [A.03](#) Identified Sites
- [A.04](#) Identification Using Class Locations (Method 1)
- [A.05](#) Identification Using Potential Impact Radius (Method 2)
- [A.06](#) Identification and Evaluation of Newly Identified HCAs, Program Requirements
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### A.01 Program Requirements

Verify that the methods defined in §192.903 High Consequence Area (1) and/or §192.903 High Consequence Area (2) are applied to each pipeline for the identification of high consequence areas. [§192.905(a)]

**A.01.a.** Verify the operator's integrity management program includes documented processes on how to implement methods (1) and (2) in order to identify high consequence areas. [§192.905(a)]

<b>A.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

**A.01.a. Statement of Issue** (Leave blank if no issue was identified.)

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**A.01.b.** Verify that the operator's process requires that the method used for each portion of the pipeline system be documented. [§192.905(a)]

<b>A.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

**A.01.b. Statement of Issue** (Leave blank if no issue was identified.)

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**A.01.c.** Verify that the operator's integrity management program includes system maps or other suitably detailed means documenting the pipeline segment locations that are located in high consequence areas. [§192.905(a)]

<b>A.01.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>A.01.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**A.01.d.** Review HCA records to verify that the operator completed identification of pipeline segments in high consequence areas by December 17, 2004. [§192.907 and §192.911(a)]

<b>A.01.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>A.01.d. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>A.01 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
			Base Line Assessment Plan for 2004-2012.
			Class Location Maps and HCA Determination/Confirmation for 2011.
II. Pipeline Integrity Management Plan Section E	2	6/30/2009	Definition of PIR calculation utilized by Ameren to establish an HCA/Identified Site

<b>A.01 Inspection Notes</b>
<p>Staff reviewed the PIR calculations for the Ameren pipelines defined below in this section. Staff established that Ameren adds a 10% buffer on PIR's footages due to possible issues with GIS mapping accuracy. Mr. Phelps informed Staff that Ameren began to GPS the location of all transmission piping in the Illinois service area in 2012 and plans to have this completed in 2014. This will aid in alleviating inconsistencies in mapping accuracy. He indicated that Champaign and Decatur areas were completed in 2012.</p> <p>Staff reviewed the inspection results for C-20 Carlyle Rt 127 to Hoffman 12 inch and C-25 which is a paralleling 6 inch transmission pipeline. Staff's calculation's for PIR on the 12 inch was 241.4 feet and the 6 inch is 120.7 feet. Review of Class location mapping on these systems indicates the PIR was equal to or more than the measurements identified by staff.</p> <p>C-30 Edwardsville /Franklin Street to Jerusalem Road segment of 6 inch with an MAOP of 720 psig. Calculation of</p>

**A.01 Inspection Notes**

PIR is 111.1 feet w/Ameren indicating the PIR as 120 feet.

C-38 Taylor Springs to Staunton 8 inch. Staff calculated the PIR to be 160.9 feet and Ameren indicated a PIR of 180 feet.



### A.02 Potential Impact Radius

Verify that the definition and use of potential impact radius for establishment of high consequence areas meets the requirements of §192.903. [§192.905(a)]

**A.02.a.** Verify that the operator's formula for calculation of the potential impact radius is consistent with §192.903 requirements ( $r = 0.69 \cdot (p \cdot d^2)^{0.5}$ ) and that the pressure used in the formula is based on maximum allowable operating pressure (MAOP).

- i. For gases other than natural gas, verify that the operator has documented processes for the use of ASME B31.8S-2004, Section 3.2 to calculate the impact radius formula [§192.903 Potential Impact Radius, §192.905(a)]

<b>A.02.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<input checked="" type="checkbox"/>	No Issues Identified
<input type="checkbox"/>	Potential Issues Identified (explain in summary)
<input type="checkbox"/>	Not Applicable (explain in summary)

<b>A.02.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**A.02.b.** In cases where potential impact circles are used to identify high consequence areas, verify that the program requires that high consequence areas include the area extending axially along the length of the pipeline from the outermost edge of the first potential impact circle to the outermost edge of the last contiguous potential impact circle for those potential impact circles that contain either an identified site or 20 or more buildings intended for human occupancy. [§192.903 High Consequence Area (3)]

<b>A.02.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<input checked="" type="checkbox"/>	No Issues Identified
<input type="checkbox"/>	Potential Issues Identified (explain in summary)
<input type="checkbox"/>	Not Applicable (explain in summary)

<b>A.02.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>A.02 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
II. Pipeline Integrity Management Plan Section E	2	6/30/2009	Determination of a covered pipeline segment and High Consequence Area (HCA)

**A.02 Inspection Notes**

Ameren has no pipelines that transport rich gas mixtures. The PIR formula utilized by Ameren has 0.69 as the factor for natural gas and is located on Page 9 of the 2009 IM plan.

### ***A.03 Identified Sites***

Verify that the operator's identification of identified sites includes the sources listed in §192.905(b) for those buildings or outside areas meeting the criteria specified by §192.903, and that the source of information selected is documented. [§192.903 Identified Sites, §192.905(b) and §192 Appendix E, I(c)]

**A.03.a.** Identified sites must include the following: [§192.903 Identified Sites, §192.905(b)]

- i. Outside areas or open structures occupied by 20 or more people on at least 50 days in any 12 month period (days need not be consecutive),
- ii. Buildings occupied by 20 or more people on at least 5 days a week for 10 weeks in any 12 month period (days and weeks need not be consecutive), and
- iii. Facilities occupied by persons who are confined, have impaired mobility, or would be difficult to evacuate.

<b>A.03.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>A.03.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**A.03.b.** Identified sites must be identified using the following sources of information: [§192.905(b)]

- i. Information from routine operation and maintenance activities and input from public officials with safety or emergency response or planning responsibilities
- ii. In the absence of public official input, the operator must use one of the following in order to identify an identified site:
  1. Visible markings such as signs, or
  2. Facility licensing or registration data on file with Federal, State, or local government agencies, or
  3. Lists or maps maintained by or available from a Federal, State, or local government agency and available to the general public.

<b>A.03.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>A.03.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>A.03 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
II. Pipeline Integrity Management Plan Section E		6/30/2009	Covered Pipeline Segment and High Consequence Area's
Map C-38		9/6/2011	Confirmed Identified sites recorded on Class location revision maps for the Taylor Springs to Staunton 8 inch Lateral 1
Map C-08		9/1/2011	Confirmed Identified sites recorded on Class location maps utilized for class location and HCA confirmation. Fairmont City to Granite City/Station B.

<b>A.03 Inspection Notes</b>
Ameren confirmed with the program vendor that nominal pipe size is used when calculating PIR's. Staff had noted during the last IM inspection performed in 2010 that in some cases actual pipe diameters were being utilized to calculate the PIR. This has been corrected.

### ***A.04 Identification Using Class Locations (Method 1)***

If the operator's integrity management program relies on §192.903 High Consequence Area definition (1) for identification of high consequence areas, verify compliance with the following:

**A.04.a.** Verify the integrity management program includes Class 3 and Class 4 piping locations as high consequence areas consistent with the criteria of §192.5(b)(3), §192.5(b)(4), and §192.5(c). [§192.903 High Consequence Area (1) (i) and (ii)]

<b>A.04.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>A.04.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**A.04.b.** For Class 1 and Class 2 locations with the potential impact radius greater than 660 feet, verify the integrity management program includes piping locations as high consequence areas if the area within the associated potential impact circle contains 20 or more buildings intended for human occupancy.[§192.903 High Consequence Area (1)(iii)]

- i. As an option for PIRs greater than 660 feet, the definition of high consequence area may be based on a prorated building count for buildings intended for human occupancy within a distance of 660 feet (200 meters) from the centerline of the pipeline as calculated using the following formula:  
[§192.903 High Consequence Area (4)]

Building Count within 660 feet =  $20 \times [660 \text{ (ft)} / \text{PIR (ft)}]^2$  or  
Building Count within 200 meters =  $20 \times [200 \text{ (m)} / \text{PIR (m)}]^2$

1. If the option for use of a prorated number of buildings has been used for identification of high consequence areas, verify that the program acknowledges that use of the prorated allowance is only available to operators until December 17, 2006. [§192.903 High Consequence Area (4)]

<b>A.04.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>A.04.b. Statement of Issue</b> (Leave blank if no issue was identified.)

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**A.04.c.** Verify the program includes as a high consequence area, any area in Class 1 and Class 2 piping locations where the potential impact circle contains an identified site. [§192.903 High Consequence Area (1)(iv)]

<b>A.04.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>A.04.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>A.04 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
E. 7	2	6/30/2009	Figure 2 - Determining HCA
E. 7	2	6/30/2009	Determining High Consequence Areas

<b>A.04 Inspection Notes</b>
A.04.a-b – Review of PIR data Staff established that Ameren does not utilize class three locations to establish HCA's, they are using the PIR calculations. There are no class four locations in the Ameren transmission system and there are no PIR's in the transmission systems that are over 660 feet.

### ***A.05 Identification Using Potential Impact Radius (Method 2)***

If the operator's integrity management program relies on §192.903 High Consequence Area definition (2) for identification of high consequence areas, verify compliance with the following:

**A.05.a.** Verify the integrity management program includes piping locations as high consequence areas if the area within a potential impact circle contains 20 or more buildings intended for human occupancy: [§192.903 High Consequence Area (2)(i)]

- i. As an option for PIRs greater than 660 feet, the definition of high consequence area may be based on a prorated building count for buildings intended for human occupancy within a distance of 660 feet (200 meters) from the centerline of the pipeline as calculated using the following formula: [§192.903 High Consequence Area (4)]

Building Count within 660 feet =  $20 \times [660 \text{ (ft)} / \text{PIR (ft)}]^2$  or  
 Building Count within 200 meters =  $20 \times [200 \text{ (m)} / \text{PIR (m)}]^2$

1. If the option for use of a prorated number of buildings has been used for identification of high consequence areas, verify that the program acknowledges that use of the prorated allowance is only available to operators until December 17, 2006. [§192.903 High Consequence Area (4)]

<b>A.05.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
<b>X</b>	Not Applicable (explain in summary)

<b>A.05.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**A.05.b.** Verify the program includes piping locations as high consequence areas if the area within the potential impact circle contains an identified site. [§192.903 High Consequence Area (2)(ii)]

<b>A.05.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>A.05.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>A.05 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
C-37		8/8/2011	HCA Class Location map for Peoria Gate to Fisher Road 100/200 Line 16 inch
C-41		8/30/2011	Hillsboro Storage to Arthur 20 inch
C-81		9/9/2011	Southern Industrial Line 12 and 8 inch

  

<b>A.05 Inspection Notes</b>
<p>A.05.a - No prorating of buildings was utilized by Ameren to establish HCA's.</p> <p>Staff reviewed the above 2011 class location survey / HCA verification maps and determined that identified sites/HCA's were identified, confirmed by completing field visits and documented on the maps utilized for the class location and HCA confirmations.</p>



### ***A.06 Identification and Evaluation of Newly Identified HCAs, Program Requirements***

Review the operator's integrity management program to verify processes are in place for evaluation of new information that may show that a pipeline segment impacts a high consequence area. [§192.905(c)]

**A.06.a.** Verify the operator's integrity management program includes documented processes for how new information that shows a pipeline segment impacts a high consequence area is identified and integrated with the integrity management program. The program is to identify and analyze changes for impacts on pipeline segments potentially affecting high consequence areas. Issues the program must consider include but are not limited to:[§192.905(c)]

- i. Changes in pipeline maximum allowable operating pressure (MAOP),
- ii. Pipeline modifications affecting piping diameter,
- iii. Changes in the commodity transported in the pipeline,
- iv. Identification of new construction in the vicinity of the pipeline that results in additional buildings intended for human occupancy or additional identified sites,
- v. Change in the use of existing buildings (e.g., hotel or house converted to nursing home),
- vi. Installation of new pipeline,
- vii. Change in pipeline class location (e.g., class 2 to 3) or class location boundary,
- viii. Pipeline reroutes
- ix. Corrections to erroneous pipeline center line data.

<b>A.06.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>A.06.a. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>A.06 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
		12/2011	2011 Class Location Change List

<b>A.06 Inspection Notes</b>
Staff reviewed the Class location maps and the HCA listing to determine if new HCA's were present. Staff determined that revisions to existing HCA's and addition of new HCA's have been identified and added to the database utilized to print the Class Location/HCA maps and has been added to the program that tracks the IM baseline inspections.

## Protocol Area B. Baseline Assessment Plan

- [B.01](#) Assessment Methods
- [B.02](#) Prioritized Schedule
- [B.03](#) Use of Prior Assessments
- [B.04](#) Newly Identified HCAs/Newly Installed Pipe
- [B.05](#) Consideration of Environmental and Safety Risks
- [B.06](#) Changes
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### ***B.01 Assessment Methods***

Verify that the operator's Baseline Assessment Plan (BAP) specifies an assessment method(s) for each covered segment that is best suited for identifying anomalies associated with specific threats identified for the segment. [§192.919(b), §192.921(a), §192.921(c), and §192.921(h)]

**B.01.a.** Verify that the operator followed ASME B31.8S-2004, Section 6 and that the assessment methods selected for each covered segment addresses all of the threats identified for the segment. More than one assessment tool may be necessary to address all applicable threats to a covered segment. [§192.919(b), §192.921(a), §192.921(c), and §192.921(h)]

<b>B.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)
<b>B.01.a. Statement of Issue</b> (Leave blank if no issue was identified.)	

**B.01.b.** If internal inspection tools are selected, verify that the operator followed ASME B31.8S-2004, Section 6.2 in selecting the appropriate internal inspection tool for the covered segment. [§192.921(a)(1)]

- i. Verify that the operator has evaluated the general reliability of any in-line assessment method selected by looking at factors including but not limited to: detection sensitivity; anomaly classification; sizing accuracy; location accuracy; requirements for direct examination; history of tool; ability to inspect full length and full circumference of the section; and ability to indicate the presence of multiple cause anomalies. Refer to ASME B31.8S-2004, Section 6.2.5.  
[§192.921(a)(1)]

<b>B.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
<b>X</b>	Not Applicable (explain in summary)

<b>B.01.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.01.c.** If a pressure test is specified, verify that the test is required to be conducted in accordance with Part 192, Subpart J requirements. Verify that the operator followed ASME B31.8S-2004, Section 6.3 in selecting the pressure test as the appropriate assessment method. [§ 192.921(a)(2)]

<b>B.01.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)
<input type="checkbox"/> No Issues Identified
<input type="checkbox"/> Potential Issues Identified (explain in summary)
<input checked="" type="checkbox"/> Not Applicable (explain in summary)

<b>B.01.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.01.d.** If the operator specifies the use of "other technology," verify that notification to PHMSA is required in accordance with Part 192.949, 180 days before conducting the assessment. Also, verify that notification to a State or local pipeline safety authority is required when either a covered segment is located in a State where PHMSA has an interstate agent agreement, or an intrastate covered segment is regulated by that State. [§ 192.921(a)(4)]

<b>B.01.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)
<input type="checkbox"/> No Issues Identified
<input type="checkbox"/> Potential Issues Identified (explain in summary)
<input checked="" type="checkbox"/> Not Applicable (explain in summary)

<b>B.01.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.01.e.** If a covered pipeline segment contains low frequency electric resistance welded pipe (ERW) or lap welded pipe that satisfies the conditions specified in ASME B31.8S-2004, Appendix A4.3 and ASME B31.8S-2004, Appendix A4.4, and any covered or non-covered segment in the pipeline system with such pipe has experienced seam failure, or operating pressure on the covered segment has increased over the maximum operating pressure experienced during the preceding five years verify that the selected assessment method(s) are proven to be capable of assessing seam integrity and detecting seam corrosion anomalies. [§192.917(e)(4)]

<b>B.01.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.01.e. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.01.f.** If the threat analysis required in §192.917(d) on a plastic transmission pipeline indicates that a covered segment is susceptible to failure from causes other than third-party damage, verify that the operator documents an acceptable justification for the use of an alternative assessment method that will address the identified threats to the covered segment. [§192.921(h)]

<b>B.01.f. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
<b>X</b>	Not Applicable (explain in summary)

<b>B.01.f. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>B.01 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
		12/2010	Mears Report for External Corrosion Direct Assessment (ECDA) on Hoffman Station to Carlyle Lateral
		12/2010	Mears Report for ECDA on Maryville to Highland
		2004-2012	Baseline Assessment Plan

<b>B.01 Inspection Notes</b>
B.01.a – Adequate assessment techniques were selected by Ameren for the pipelines assessed in 2010-2011.
B.01.b – There were no ILI runs performed in 2010-2011. N/A
The baseline plan is located in Appendix B of the plan and indicates how the piping is to be inspected and indicates the next inspection date and the prior date where a reassessment has been completed.
B.01.c – Pressure tests were not utilized to establish the baseline on piping assessed in 2010-2011. Pressure testing

**B.01 Inspection Notes**

was performed on a segment located on the Mt. Zion lateral. Due to the confirmation of low frequency ERW piping during an integrity dig, the line segment was pressure tested to ensure/confirm the integrity of the pipeline was sufficient for the MAOP. The line was initially assessed using ECDA to establish the baseline.

B.01.d – There was no use of other technology in 2010 – 2011. All assessments were performed using ECDA.

B.01.e – Ameren has not experienced any seam failures on ERW piping. They have detected low frequency piping in the Mt. Zion lateral and completed a pressure tested in 2010 to establish its integrity.

B.01.f – Currently Ameren has no plastic piping in the transmission system. N/A

## ***B.02 Prioritized Schedule***

Verify that the BAP contains a schedule for completing the assessment activities for all covered segments; and that the BAP appropriately considered the applicable risk factors in the prioritization of the schedule. [§192.917(c), §192.919(c) and §192.921]

**B.02.a.** Verify that the BAP schedule includes all covered segments not already assessed. [§192.921(a)]

<b>B.02.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)
<b>B.02.a. Statement of Issue</b> (Leave blank if no issue was identified.)	

**B.02.b.** Verify that the BAP schedule prioritizes the covered segments based on potential threats and applicable risk analysis, and that the risk ranking is appropriate. [§192.917(c) and §192.921(b)]

<b>B.02.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)
<b>B.02.b. Statement of Issue</b> (Leave blank if no issue was identified.)	

**B.02.c.** Verify that covered segments meeting the following conditions are prioritized as high-risk segments.

- i. Segments that contain low frequency resistance welded (ERW) pipe or lap welded pipe that satisfy the conditions specified in ASME B31.8S-2004, Appendix A4.3 and ASME B31.8S-2004, Appendix A4.4, and any covered or non-covered segment in the pipeline system with such pipe has experienced seam failure, or operating pressure on the covered segment has increased over the maximum operating pressure experienced during the preceding five years. [§192.917(e)(4)]
- ii. Covered segments that have manufacturing or construction defects (including seam defects) where any of the following changes occurred in the covered segment: operating pressure increases above the maximum operating pressure experienced during the preceding five years; MAOP increases; or the stresses leading to cyclic fatigue increase. [§192.917(e)(3)]

<b>B.02.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.02.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.02.d.** Verify that the BAP schedule requires 50% of the covered segments, beginning with the highest risk segments, to be assessed by December 17, 2007; and that baseline assessments shall be completed for all covered segments by December 17, 2012. [§192.921(d)]

<b>B.02.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.02.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.02.e.** Review the operator's implementation progress to date and verify that: [§192.921]

- i. Assessments scheduled for completion by the date of the inspection were in fact completed.
- ii. Assessment methods used for completed assessments were as described in the plan.
- iii. The date assessment field activities were completed is recorded [so the operator understands the time frame allowable for compliance with the provisions of §192.933].

<b>B.02.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.02.e. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>B.02 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
	2	12/2012	Current Baseline Assessment List
II. Pipeline Integrity	2	6/30/2012	Baseline Assessment requirements defined in the plan. Page 14

<b>B.02 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
Management Plan Section F			

<b>B.02 Inspection Notes</b>
<p>B.02.a - Segments that have been identified with HCA's have been added to the baseline plan. Information on replaced piping has also been added to the mapping program, pipe data program and the 2012 baseline plan.</p> <p>B.02.b – Adequate threats and risk analysis is performed on segments in the IM program.</p> <p>B.02.c – Segments of low frequency pipe were identified on the Mt Zion lateral during conformation digs. Due to Ameren identifying the piping being low frequency ERW piping, pressure tests were performed on these segments to determine the integrity in 2010. As of 2012 Ameren has not encountered a seam failure on piping in their transmission system.</p> <p>B.02.d – The 2007 requirement for 50% completion was met. The 50% requirement is defined in Section F on page 14 of the plan.</p> <p>B.02.e - Ameren is currently attempting to complete the remaining casing inspections by the end of 2012. Review of the baseline plan established that no other inspections other than the casing installations are required to be performed prior to 2012.</p>



### ***B.03 Use of Prior Assessments***

If prior assessments are used in the BAP, verify that the assessment methods used meet the requirements of §192.921(a) and that remedial actions have been carried out to address conditions listed in §192.933. Prior assessments are those that were completed prior to December 17, 2002. [§ 192.921(e)]

**B.03.a.** Verify that threats to these pipeline sections were identified as required under §192.919(a).

<b>B.03.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>B.03.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.03.b.** Verify that the methods used for these prior assessments were appropriate for the threats per ANSI B31.8S-2004 as required under §192.919(b) and §192.919(d).

<b>B.03.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>B.03.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.03.c.** Verify that anomalies satisfying the requirements of §192.933 were repaired.

<b>B.03.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>B.03.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>B.03 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
II. Pipeline Integrity Management Plan Section I	2	6/2009	Hydrostatic Testing

<b>B.03 Inspection Notes</b>
<p>B.03. a-c – Ameren allows for prior assessments to be utilized to establish the baseline assessments but no prior assessments or pressure testing was utilized to establish the baseline. Page 17. N/A</p>

### ***B.04 New HCAs/Newly Installed Pipe***

Verify that the operator updates the baseline assessment plan for new HCAs and newly installed pipe. [§192.905(c), §192.921(f), §192.921(g)]

**B.04.a.** If new HCAs have been identified or new pipe has been installed that is covered by this subpart, verify that applicable segment(s) have been incorporated into the operator's baseline assessment plan within one year from the date the area or pipe is identified and assessments have been appropriately scheduled and/or completed. [§192.905(c)]

<b>B.04.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.04.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.04.b.** For new HCAs, verify that the operator completes a baseline assessment for the applicable segment(s) within ten (10) years from the date the area is identified. [§192.921(f)]

<b>B.04.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.04.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.04.c.** For newly installed pipe that is covered by this subpart and impacts an HCA, verify that the operator completes a baseline assessment within ten (10) years from the date the pipe is installed. [§192.921(g)]

<b>B.04.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.04.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.04.d.** Verify that threats to these pipeline sections were identified as required under §192.919(a).  
[§192.921(b)]

<b>B.04.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.04.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.04.e.** Verify that the assessment methods used were appropriate for the threats per ASME B31.8S-2004 as required under §192.919(b) and 192.919(d).

<b>B.04.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.04.e. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>B.04 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
		12/2012	Baseline Assessment List
II. Pipeline Integrity Management Plan Section F	2	6/30/2009	Baseline Assessment Plan

<b>B.04 Inspection Notes</b>
<p>New HCA's and HCA revisions were reviewed and found to have been added to the mapping in the baseline plan. With the resurvey cycle being 7 years they will be resurveyed within ten year requirement.</p> <p>These were located on the following lines;  Granite City to Champaign 8 inch.  Deland Station to Champaign 6 inch.  Bourbon to Decatur/PEPL 12 inch.  New piping has been installed in the Johnston City Transmission system and has been incorporated into the</p>

<b>B.04 Inspection Notes</b>
Baseline plan and is scheduled to be assessed in 2013 using ECDA processes.

### ***B.05 Consideration of Environmental and Safety Risks***

Verify that the operator addresses requirements for conducting the integrity assessments (baseline and reassessment) in a manner that minimizes environmental and safety risks. [§192.919(e) and §192.911(o)]

**B.05.a.** Verify that precautions were implemented to protect workers, members of the public, and the environment from safety hazards (such as an accidental release of gas) during assessments. [§192.919(e) and §192.911(o)]

<b>B.05.a. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>B.05.a. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>B.05 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
I. General	2	6/30/2009	Environmental and Safety

<b>B.05 Inspection Notes</b>
During field observations Staff has observed that the Environmental and Safety portion of the plan is being performed as required. Excavations are shored prior to allowing personnel to enter the excavation. Coating removed during the inspection is collected and disposed of as required due to the possibility of asbestos being present in the coal tar wrap. Workers wear face protection and gloves when using tools and respirators when removing or handling coatings. Ladders were secured as required prior to personnel entering the excavations. The environmental and safety requirement is defined on page 5 of the 2009 IM plan.

### B.06 Changes

Verify that the operator keeps the BAP up-to-date with respect to newly arising information. Also refer to Protocol K. [§192.911(k) and ASME B31.8S-2004, Section 11]

**B.06.a.** Verify that the operator's process has requirements to keep the BAP up-to-date with respect to newly arising information, applicable threats, and risks that may require changes to the segment prioritization or assessment method. [§192.911(k) & ASME B31.8S-2004, Section 11]

<b>B.06.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.06.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**B.06.b.** Verify that required BAP changes have been made and that for all changes, the following are documented: [ASME B31.8S-2004, Section 11(a)]

- i. Reason for change
- ii. Authority for approving change
- iii. Analysis of implications
- iv. Communication of change to affected parties

<b>B.06.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>B.06.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>B.06 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
		12/2012	Class location revision log.
		12/2012	Baseline Assessment Listing

<b>B.06 Inspection Notes</b>
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Ameren utilizes a third party contractor J. Sewall and Associates to maintain the mapping database utilized for the Class Location and HCA reviews of the GIS data and files. Ameren utilizes the American Innovations program called RIPPLE to perform the threat evaluation and risk rankings of the HCA segments.
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## Protocol Area C. Identify Threats, Data Integration, and Risk Assessment

- [C.01](#) Threat Identification
- [C.02](#) Data Gathering and Integration
- [C.03](#) Risk Assessment
- [C.04](#) Validation of the Risk Assessment
- [C.05](#) Plastic Transmission Pipeline
- [Table of Contents](#)

### ***C.01 Threat Identification***

Verify that the operator identifies and evaluates all potential threats to each covered pipeline segment.  
[§192.917(a)]

**C.01.a.** If the operator is following the prescriptive or performance-related approaches, verify that the following categories of failure have been considered and evaluated: [§ 192.917(a) and ASME B31.8S-2004, Section 2.2]

- i. external corrosion,
- ii. internal corrosion,
- iii. stress corrosion cracking;
- iv. manufacturing-related defects, including the use of low frequency electric resistance welded (ERW) pipe, lap welded pipe, flash welded pipe, or other pipe potentially susceptible to manufacturing defects [§ 192.917(e)(4) and ASME B31.8S-2004, Appendix A4.3];
- v. welding- or fabrication-related defects,
- vi. equipment failures;
- vii. third party/mechanical damage [§ 192.917(e)(1)],
- viii. incorrect operations (including human error),
- ix. weather-related and outside force damage,
- x. cyclic fatigue or other loading condition [§ 192.917(e)(2)],
- xi. all other potential threats.

<b>C.01.a. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>C.01.a. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

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**C.01.b.** If the operator is following the performance-based approach, verify that all 21 of the threats associated with the first nine failure categories listed above have been considered. [§192.917(a) and ASME B31.8S-2004, Section 2.2]

<b>C.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>C.01.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**C.01.c.** Verify that the operator's threat identification has considered interactive threats from different categories (e.g., manufacturing defects activated by pressure cycling, corrosion accelerated by third party or outside force damage) [ASME B31.8S-2004, Section 2.2].

<b>C.01.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
X	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>C.01.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**C.01.d.** Verify that the approach incorporates appropriate criteria for eliminating a specific threat for a particular pipeline segment. [ASME B31.8S-2004, Section 5.10]

<b>C.01.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>C.01.d. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>C.01 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
II Pipeline Integrity Management Plan Section F	2	6/2009	Threat identification Page 12 of the plan.
		2012	Baseline Assessment Plan

**C.01 Inspection Notes**

C.01.a – The operator is utilizing a Prescriptive program and is using the required threats.

C.01.b – The operator is not utilizing a performance based program as of 2012. N/A

C.01.c – The operator has included interactive threats as indicated by B31.8S and are defined on page 12 of the plan.

C.01.d - Ameren has not eliminated any threats from the threat analysis process for HCA's. They utilize all the threats when analyzing the HCA.

## ***C.02 Data Gathering and Integration***

Verify that the operator gathers and integrates existing data and information on the entire pipeline that could be relevant to covered segments, and verify that the necessary pipeline data have been assembled and integrated. [§192.917(b)]

**C.02.a.** Verify that the operator has in place a comprehensive plan for collecting, reviewing, and analyzing the data. [ASME B31.8S-2004, Section 4.2 and ASME B31.8S-2004, Section 4.4]

<b>C.02.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>C.02.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**C.02.b.** Verify that the operator has assembled data sets for threat identification and risk assessment according to the requirements in ASME B31.8S-2004, Section 4.2, ASME B31.8S-2004, Section 4.3, and ASME B31.8S-2004, Section 4.4. At a minimum, an operator must gather and evaluate the set of data specified in ASME B31.8S-2004, Appendix A (summarized in ASME B31.8S-2004, Table 1) and consider the following on covered segments and similar non-covered segments [§192.917(b)]:

1. Past incident history
2. Corrosion control records
3. Continuing surveillance records
4. Patrolling records
5. Maintenance history
6. Internal inspection records
7. All other conditions specific to each pipeline.

<b>C.02.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>C.02.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**C.02.c.** Verify that the operator has utilized the data sources listed in ASME B31.8S-2004, Table 2, for initiation of the integrity management program. [ASME B31.8S-2004, Section 4.3]

<b>C.02.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>C.02.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**C.02.d.** Verify that the operator has checked the data for accuracy. If the operator lacks sufficient data or where data quality is suspect, verify that the operator has followed the requirements in ASME B31.8S-2004, Section 4.2.1, ASME B31.8S-2004, Section 4.4, and ASME B31.8S-2004, Appendix A [ASME B31.8S-2004, Section 4.1, ASME B31.8S-2004, Section 4.2.1, ASME B31.8S-2004, Section 4.4, ASME B31.8S-2004, Section 5.7(e), and ASME B31.8S-2004, Appendix A]:

- i. Each threat covered by the missing or suspect data is assumed to apply to the segment being evaluated. The unavailability of identified data elements is not a justification for exclusion of a threat.
- ii. Conservative assumptions are used in the risk assessment for that threat and segment or the segment is given higher priority.
- iii. Records are maintained that identify how unsubstantiated data are used, so that the impact on the variability and accuracy of assessment results can be considered.
- iv. Depending on the importance of the data, additional inspection actions or field data collection efforts may be required.

<b>C.02.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>C.02.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**C.02.e.** Verify that the operator's program includes measures to ensure that new information is incorporated in a timely and effective manner, as addressed in Protocol K. [§192.911(k), ASME B31.8S-2004, Section 11(b) and ASME B31.8S-2004, Section 11(d)]

<b>C.02.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>C.02.e. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

**C.02.f.** Verify that individual data elements are brought together and analyzed in their context such that the integrated data can provide improved confidence with respect to determining the relevance of specific threats and can support an improved analysis of overall risk. [ASME B31.8S-2004, Section 4.5]. Data integration includes:

- i. A common spatial reference system that allows association of data elements with accurate locations on the pipeline [ASME B31.8S-2004, Section 4.5];
- ii. Integration of ILI or ECDA results with data on encroachments or foreign line crossings in the same segment to define locations of potential third party damage [§192.917(e)(1)].

<b>C.02.f. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>C.02.f. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>C.02 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
II. Pipeline Integrity Management Plan Section F	2	6/30/2009	Threat Identification and Analysis.

<b>C.02 Inspection Notes</b>
<p>C.02. a – Ameren has a comprehensive plan in place to collect, reviewing and analyzing the program data.</p> <p>C.02.b – Ameren utilizes the required risk sets and threats on pipelines with HCA's or identified sites.</p> <p>C.02.c – Ameren has utilized the data sets specified in B31.8S.</p> <p>C.02.d -e– The operator has followed the requirements for data accuracy and when revisions are identified they are incorporated into the program.</p> <p>C.02.f – All data elements are brought together an analyzed as a unit to establish their rankings and to determine what can be done to limit or prevent specific threats from affecting the pipeline segment.</p>

### ***C.03 Risk Assessment***

Verify that the operator has conducted a risk assessment that follows ASME B31.8S-2004, Section 5, and that considers the identified threats for each covered segment. [§192.917(c)] [Note: Application of the risk assessment to prioritize the covered segments for the baseline assessment is covered in Protocol B, continual reassessments in Protocol F, and additional preventive and mitigative measures in Protocol H.]

**C.03.a.** Verify that the operator's risk assessment supports the following objectives [ASME B31.8S-2004, Section 5.3 and ASME B31.8S-2004, Section 5.4]:

- i. prioritization of pipelines/segments for scheduling integrity assessments and mitigating action
- ii. assessment of the benefits derived from mitigating action
- iii. determination of the most effective mitigation measures for the identified threats
- iv. assessment of the integrity impact from modified inspection intervals
- v. assessment of the use of or need for alternative inspection methodologies
- vi. more effective resource allocation
- vii. facilitation of decisions to address risks along a pipeline or within a facility

<b>C.03.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>C.03.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**C.03.b.** Verify that the operator utilizes one or more of the following risk assessment approaches [ASME B31.8S-2004, Section 5.5]:

- i. Subject matter experts (SMEs),
- ii. Relative assessment models,
- iii. Scenario-based models, or
- iv. Probabilistic models

<b>C.03.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>C.03.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**C.03.c.** Verify that the risk assessment explicitly accounts for factors that could affect the likelihood of a release and for factors that could affect the consequences of potential releases, and that these factors are

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combined in an appropriate manner to produce a risk value for each pipeline segment. [ASME B31.8S-2004, Section 3.1, ASME B31.8S-2004, Section 3.3, ASME B31.8S-2004, Section 5.2, ASME B31.8S-2004, Section 5.3 and ASME B31.8S-2004, Section 5.7(j)] Verify that the risk assessment approach includes the following characteristics:

- i. The risk assessment approach contains a defined logic and is structured to provide a complete, accurate, and objective analysis of risk [ASME B31.8S-2004, Section 5.7(a)];
- ii. The risk assessment considers the frequency and consequences of past events, using company and industry data [ASME B31.8S-2004, Section 5.7(c)];
- iii. The risk assessment approach integrates the results of pipeline inspections in the development of risk estimates [ASME B31.8S-2004, Section 5.7(d)];
- iv. The risk assessment process includes a structured set of weighting factors to indicate the relative level of influence of each risk assessment component [ASME B31.8S-2004, Section 5.7(i)];
- v. The risk assessment process incorporates sufficient resolution of pipeline segment size to analyze data as it exists along the pipeline [ASME B31.8S-2004, Section 5.7(k)].

<b>C.03.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>C.03.c. Statement of Issue</b> (Leave blank if no issue was identified.)          
---

**C.03.d.** Verify that the operator's process provides for revisions to the risk assessment if new information is obtained or conditions change on the pipeline segments. Verify that the provisions for change to the risk assessment address the following areas:

- i. the risk assessment plan calls for recalculating the risk for each segment to reflect the results from an integrity assessment or to account for completed prevention and mitigation actions. [ASME B31.8S-2004, Section 5.11, and ASME B31.8S-2004, Section 5.7(c)]
- ii. the operator integrates the risk assessment process into field reporting, engineering, facility mapping, and other processes as necessary to ensure regular updates. [ASME B31.8S-2004, Section 5.4]
- iii. the integrity management plan calls for revision to the risk assessment process if pipeline maintenance or other activities identify inaccuracies in the characterization of the risk for any segments. [§192.917(c) and ASME B31.8S-2004, Section 5.12]
- iv. the operator uses a feedback mechanism to ensure that the risk model is subject to continuous validation and improvement. [§192.917(c) and ASME B31.8S-2004, Section 5.7(f)]

<b>C.03.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)



<b>C.03.d. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

**C.03.e.** Verify that adequate time and personnel have been allocated to permit effective completion of the selected risk assessment approach. [ASME B31.8S-2004, Section 5.7(b)]

<b>C.03.e. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>C.03.e. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>C.03 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
Appendix B	2	9/30/2009	Risk Analysis Process pages 49-62.
			Baseline Assessment Listing

<b>C.03 Inspection Notes</b>
C.03 - Review of the baseline assessment listing indicates that the highest ranking segments were prioritized and all required segments will be completed by the end of 2012. Ameren is currently attempting to complete assessment of the remaining casing installations on transmission piping. The identification of the low frequency piping identified in the Mt Zion lateral was observed during a piping inspection after completing the ECDA survey. This information has been incorporated into the program to establish the risk ranking.

### ***C.04 Validation of the Risk Assessment***

Verify that the integrity management program identifies and documents a process to validate the results of the risk assessments. [§192.917(c) and ASME B31.8S-2004, Section 5.12]

**C.04.a.** Verify that the validation process includes a check that the risk results are logical and consistent with the operator's and other industry experience. [§192.917(c) and ASME B31.8S-2004, Section 5.12]

<b>C.04.a. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>C.04.a. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>C.04 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
Appendix B	2	9/2009	Risk Analysis Process Page 49-54
Appendix B	2	9/2009	Preventative and Mitigative Measures Page 54

<b>C.04 Inspection Notes</b>
<p>C.04 - Ameren reviews the results of the Risk Analysis process annually and if there is concern about a segment ranking it can be tested to ensure the results are correct. If the risk is found needing further actions the ranking can be revised to include the issue identified and apply the required actions for the revised risk ranking.</p>

### ***C.05 Plastic Transmission Pipeline***

If the operator has plastic transmission pipelines, verify that the operator assesses applicable threats to each covered segment of plastic line. [§ 192.917(d)]

**C.05.a.** If the operator has plastic transmission lines, verify that the information in ASME B31.8S-2004, Section 4 and ASME B31.8S-2004, Section 5, and any unique threats to the integrity of plastic pipe have been considered when assessing the threats to each covered segment of plastic pipeline. [§ 192.917(d)]

<b>C.05.a. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
<b>X</b>	Not Applicable <i>(explain in summary)</i>

<b>C.05.a. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>C.05 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
Appendix C		2012	Baseline Assessment Plan - Listing

<b>C.05 Inspection Notes</b>
C.05 is not applicable because Ameren has no plastic piping classified as transmission.

## Protocol Area D. DA Plan

- [D.01](#) ECDA Programmatic Requirements
- [D.02](#) ECDA Pre-Assessment
- [D.03](#) ECDA Indirect Examination
- [D.04](#) ECDA Direct Examination
- [D.05](#) ECDA Post-Assessment
- [D.06](#) Dry Gas ICDA Programmatic Requirements
- [D.07](#) Dry Gas ICDA Pre-Assessment, Region Identification, Use of Model & Indirect Inspection
- [D.08](#) Dry Gas ICDA Direct Examination
- [D.09](#) Dry Gas ICDA Post-Assessment
- [D.10](#) Wet Gas ICDA Programmatic Requirements –
- [D.11](#) SCCDA Data Gathering & Evaluation
- [D.12](#) SCCDA Assessment, Examination, & Threat Remediation
- [Table of Contents](#)

### ***D.01 ECDA Programmatic Requirements***

If the operator elects to use ECDA, verify that the operator develops and implements an ECDA plan in accordance with §192.925.

**D.01.a.** Verify that the operator developed a documented ECDA plan, and developed procedures to implement the plan. [§192.925(b)]

<b>D.01.a. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>D.01.a. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>D.01 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
Review ECDA inspections		2011	Bridal Tap/162 to Highland Poplar St Station Digs GTS 976-979, 981, 989, 991, 994, 996-1000, 1007.

<b>D.01 Inspection Notes</b>
D.01 - The operator utilizes at least two tools when applying ECDA and in most cases uses three or more tools. These are commonly DCVG or ACVG, CIS and PCM with soil resistivity measurements being performed at each indication and the start and stop points.

### ***D.02 ECDA Pre-Assessment***

Verify that the ECDA Pre-assessment process complies with ASME B31.8S-2004, Section 6.4 and NACE RP0502-2002 to (1) determine if ECDA is feasible for the pipeline to be evaluated, (2) identify ECDA regions and (3) select Indirect Inspection Tools. [§ 192.925(b)(1)]

**D.02.a.** Verify that the operator **identifies and collects adequate data** to support ECDA pre-assessment. [NACE RP0502-2002, Section 3.2]

<b>D.02.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.02.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.02.b.** Verify that the operator conducts an ECDA **feasibility assessment** by integrating and analyzing the data collected. [NACE RP0502-2002, Section 3.3]

<b>D.02.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.02.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.02.c.** Verify that the operator complies with all requirements for appropriate indirect inspection **tools selection**: [NACE RP0502-2002, Section 3.4, NACE RP0502-2002, Table 2, and 192.925(b)(1)(ii)]

- i. A minimum of 2 complementary tools must be selected such that the strengths of one tool compensate for the limitations of the other tool. (Note: The operator must consider whether more than two indirect inspection tools are needed to reliably detect corrosion activity.)
- ii. Tools are able to assess and reliably detect corrosion activity and/or coating holidays.
- iii. Verify that the operator documents the basis for its tool selection.
- iv. If the operator utilizes an indirect inspection method not listed in NACE RP0502-2002, Appendix A, verify that the operator justifies and documents the method's applicability, validation basis, equipment used, application procedure, and utilization of data. [§ 192.925(b)(1)(ii)]

<b>D.02.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)

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<b>D.02.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	Not Applicable (explain in summary)

<b>D.02.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.02.d.** Verify that the operator **identifies ECDA Regions** based on the use of data integration results applied to specified criteria. [NACE RP0502-2002, Section 3.5]

<b>D.02.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
X	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.02.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.02.e.** Verify that the operator applies more restrictive criteria when conducting ECDA pre-assessment for the first time on a covered segment. [§192.925(b)(1)(i)]

<b>D.02.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
X	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.02.e. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>D.02 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
Appendix H #4	2	9/2009	Identification of ECDA Regions
Appendix H	2	9/2009	External Corrosion Direct Assessment (ECDA)

**D.02 Inspection Notes**

D.02 – Review of assessments completed in 2010-2011, established that Ameren utilized ECDA for a majority of the inspections performed in HCA's within their system due to the inability to pig a majority of their transmission pipelines. When performing ECDA a minimum of two tools were used usually utilizing Close Interval Surveys (CIS) and Direct Current Voltage Gradient (DCVG). In some instances Pipeline Current Mapper (PCM) was utilized to aid in defining/confirming the locations of indications and current flow. Guided Wave was utilized to inspect cased crossings and for assessing defined areas for indications of Internal Corrosion (ICDA).

### ***D.03 ECDA Indirect Examination***

Verify that the ECDA Indirect Examination process complies with ASME B31.8S-2004, Section 6.4 and NACE RP0502-2002, Section 4 to identify and characterize the severity of coating fault indications, other anomalies, and areas at which corrosion activity may have occurred or may be occurring, and establish priorities for excavation. [§192.925(b)(2)]

**D.03.a.** Verify that the operator **conducts indirect examination measurements** in accordance with NACE RP0502-2002, Section 4.2.

- i. Verify that the operator identifies and clearly marks the boundaries of each ECDA region. [NACE RP0502-2002, Section 4.2.1]
- ii. Verify that the operator performs indirect inspections over the entire lengths of each ECDA region and that the inspections conform to generally accepted industry practices. [NACE RP0502-2002, Section 4.2.2]
- iii. Verify that the operator specifies and follows generally accepted industry practices for conducting ECDA indirect inspections and analyzing results. [NACE RP0502-2002, Section 4.2.2]
- iv. Verify that the operator specifies the physical spacing of readings (and the practices for changing the spacing as needed) such that suspected corrosion activity on the segment can be detected and located. [NACE RP0502-2002, Section 4.2.3]

<b>D.03.a. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

**D.03.a. Statement of Issue** *(Leave blank if no issue was identified.)*

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**D.03.b.** Verify that the operator properly aligns indications and compares the data from each indirect examination to characterize both the severity of indications and urgency for direct examination in accordance with NACE RP0502-2002, Section 4.3 and NACE RP0502-2002, Section 5.2.

- i. Verify the operator specifies criteria for identifying and documenting those indications that must be considered for excavation and direct examination. Minimum criteria include
  1. Known sensitivities of assessment tools
  2. The procedures for using each tool
  3. The approach to be used for decreasing the physical spacing of indirect assessment tool readings when the presence of a defect is suspected. [§192.925(b)(2)(ii) and NACE RP0502-2002, Section 4.3.1.1]
- ii. Verify that the operator specifies and applies criteria for classification of the severity of each indication. [NACE RP0502-2002, Section 4.3.2],
  1. Verify that the operator considers the impact of spatial errors when aligning indirect examination results. [NACE RP0502-2002, Section 4.3.1.2]
  2. Verify that the operator compares the results from the indirect inspections and determines the consistency of indirect inspections results to resolve conflicting or differing indications by the primary and secondary tools. [NACE RP0502-2002, Section 4.3.3]



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3. Verify that the operator compares indirect inspection results with pre-assessment results to confirm or reassess ECDA feasibility and ECDA Region definitions. [NACE RP0502-2002, Section 4.3.4]
- iii. Verify that the operator specified and applies criteria for defining the urgency level (i.e., immediate, scheduled, or monitored) with which excavation and direct examination of indications will be conducted based on the likelihood of current corrosion activity plus the extent and severity of prior corrosion. [§192.925(b)(2)(iii) and (iv) and NACE RP0502-2002, Section 5.2]
- iv. Verify that the operator's ECDA procedures have a process to address pipeline coating indications. The procedures must provide for integrating ECDA data with encroachment and foreign line crossing data to evaluate the covered segment for the threat of third party damage, and to address this threat as required by §192.917(e)(1) (See Protocol C.02 and Protocol C.03). [§192.917(b), §192.917(e) and §192.925(b)]

<b>D.03.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.03.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.03.c.** Verify that the operator applies more restrictive criteria when conducting ECDA indirect examinations for the first time on a covered segment. [§192.925(b)(2)(i)]

<b>D.03.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.03.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>D.03 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
Appendix H	2	9/2009	External Corrosion Direct Assessment (ECDA)

<b>D.03 Inspection Notes</b>
D.03 - Review of completed inspections and plan requirements determined Ameren utilizes and follows both SP0502-2008 and B31.8S as their standard for ECDA inspections.

#### ***D.04 ECDA Direct Examination***

Verify that the ECDA Direct Examination process complies with ASME B31.8S-2004, Section 6.4 and NACE RP0502-2002, Section 5 to collect data to assess corrosion activity and remediate defects discovered. [NACE RP0502-2002, Section 5.1.1 and §192.925(b)(3)]

**D.04.a.** Verify that the operator performs excavations and data collection in accordance with NACE RP0502-2002, Section 5.3, NACE RP0502-2002, Section 5.4, NACE RP0502-2002, Section 5.10 and NACE RP0502-2002, Section 6.4.2.

- i. Verify that the operator makes excavations based on priority categories described in NACE RP0502-2002, Section 5.2. [NACE RP0502-2002, Section 5.3.1]
- ii. Verify that the operator identifies and implements minimum requirements for data collection, measurements, and recordkeeping, to evaluate coating condition and significant corrosion defects at each excavation location. [NACE RP0502-2002, Section 5.3, NACE RP0502-2002, Section 5.4, NACE RP0502-2002, Appendix A, NACE RP0502-2002, Appendix B, and NACE RP0502-2002, Appendix C]
- iii. Verify that the number and location of direct examinations complies with NACE RP0502-2002, Section 5.10 and NACE RP0502-2002, Section 6.4.2

<b>D.04.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.04.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.04.b.** Verify that the operator determines the remaining strength at locations where corrosion defects are found. Any corrosion defects discovered during direct examinations must be remediated in accordance with §192.933. [§192.925(b)(3)(ii), §192.933, and NACE RP0502-2002, Section 5.5]

<b>D.04.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.04.b. Statement of Issue</b> (Leave blank if no issue was identified.)

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**D.04.c.** Verify that the operator identifies the root cause of all significant corrosion activity, [NACE RP0502-2002, Section 5.6] and identifies and reevaluates all other indications that occur in the pipeline segment where similar root-cause conditions exist. [NACE RP0502-2002, Section 5.9.3]

- i. Verify that the operator considers alternative methods of assessing the integrity of the pipeline segment if the operator's root cause analysis uncovers problems for which ECDA is not well suited. [NACE RP0502-2002, Section 5.6.2 and §192.925(b)(3)(ii)(b)]

<b>D.04.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.04.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.04.d.** Verify that the operator mitigates or precludes future external corrosion resulting from significant root causes. [NACE RP0502-2002, Section 5.7]

<b>D.04.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
<b>X</b>	Not Applicable (explain in summary)

<b>D.04.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.04.e.** Verify that the operator performs an evaluation of the indirect inspection data, the results from the remaining strength evaluation and root cause analysis to evaluate the criteria and assumptions used to: [NACE RP0502-2002, Section 5.7, NACE RP0502-2002, Section 5.8 and §192.933]

- i. Categorize the need for repairs
- ii. Classify the severity of individual indications

<b>D.04.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.04.e. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.04.f.** As appropriate, verify the basis upon which the operator may reclassify and reprioritize indications in accordance with any of the provisions that are specified in NACE RP0502-2002, Section 5.9. [§192.925(b)(3)(iv)]

<b>D.04.f. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.04.f. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.04.g.** Verify the operator establishes and implements criteria and internal notification procedures for any changes in the ECDA Plan, including changes that affect the severity classification, the priority of direct examination, and the time frame for direct examination of indications. [§192.925(b)(3)(iii), §192.909, and §192.911(k)]

<b>D.04.g. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.04.g. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.04.h.** Verify that the operator has a process to consider the use of assessment methods other than ECDA (i.e., ILI or Subpart J pressure test) to assess the impact of defects other than external corrosion (e.g., mechanical damage and stress corrosion cracking) discovered during direct examination. [NACE RP0502-2002, Section 5.1.5 and §192.933]

<b>D.04.h. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.04.h. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

**D.04.i.** Verify that the operator applies more restrictive criteria when conducting ECDA direct examination for the first time on a covered segment. [§192.925(b)(3)(i)]

<b>D.04.i. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>D.04.i. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>D.04 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
Appendix H	2	9/2009	External Corrosion Direct Assessment
Appendix H #15	2	9/2009	Reclassification and Reprioritization
Appendix H #2	2	9/2009	Selection of Indirect Inspection Tools
Appendix M	2	9/2009	Remaining Strength Calculations utilizing GTI-G1
Appendix H (H 2 (3))	2	9/2009	Use of other inspection tools
Appendix H Table 1	2	9/2009	ECDA Scoring for First Time Applications and for Reassessments

<b>D.04 Inspection Notes</b>
<p>D.04.a – Excavations and data gathering was performed as required. Staff reviewed the piping evaluations performed by Ameren utilizing ENEngineering personnel in 2010-2011 and indicates no corrosion was observed on the excavations/evaluations performed. Staff determined that the proper number of excavations was performed on the segments inspected in 2010-2011.</p> <p>D.04.b - The evaluations performed in 2010-2011 did not indicate areas of corrosion and were not required to perform a root cause evaluations. Defects were determined to be from construction related or prior third party damage.</p> <p>D.04.c - Root cause process is defined in Appendix R of the plan and allows for the use of alternative methods. No alternative methods were utilized in 2010-2011.</p> <p>D.04.d - No root cause evaluations were required to be performed due to the findings of the inspections performed so Staff could not establish if this requirement is being met. Root Cause evaluations are defined in Appendix R of the plan on page 150.</p> <p>D.04.e - There were no reclassifications or reprioritization of indications in 2010-2011. The requirements for this are defined on #15 on page 95 of the plan.</p>

**D.04 Inspection Notes**

D.04.f – No indications were reclassified in 2010-2011. The plan does allow for reclassifications to be performed if warranted. Appendix H Section 15 page 95.

D.04.g – Ameren's plan has procedures for initiating notifications due to changes in the ECDA inspection process. No notifications were required in 2010-2011 as no changes were required.

D.04.h – The operators plan allows for the use of other inspection processes but no others were utilized in 2011-2012. Defined in Appendix H section H 2 (3). Page 83.

D.04.i – Scoring for first time inspections are listed in Table 1 of Appendix H. The first time scoring is more stringent. Table 1 Page 90-91.

### ***D.05 ECDA Post-Assessment***

Verify that the ECDA Post assessment process complies with ASME B31.8S-2004, Section 6.4 and NACE RP0502-2002, Section 6, to (1) define reassessment intervals and (2) assess the overall effectiveness of the ECDA process. [§192.925(b)(4) and §192.939]

**D.05.a.** Verify that the operator determined **reassessment intervals** in accordance with NACE RP0502-2002, Section 6.

- i. Verify the adequacy of the operators remaining life calculations. [NACE RP0502-2002, Section 6.2]
- ii. Verify that the maximum re-assessment intervals for each region are one half the calculated remaining life. [NACE RP0502-2002, Section 6.1.3 and NACE RP0502-2002, Section 6.3]

<b>D.05.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.05.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.05.b.** Verify that the reassessment intervals are adjusted if required in accordance with special provisions in Subpart O, as follows:

- i. Verify that reassessment intervals do not exceed the maximum intervals (refer to Protocol F) established in §192.939, as follows:
  1. 10 years for pipeline segments operating at SMYS levels greater than 50%
  2. 15 years for those segments operating between 30 and 50% SMYS
  3. 20 years for those segments operating below 30% SMYS
- ii. Verify that the operator specifies and applies criteria for evaluating whether conditions discovered by direct examination of indications in each ECDA region indicate a need for reassessment of the covered segment at an interval less than that specified in §192.939. [§192.925(b)(4)(ii)]

<b>D.05.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.05.b. Statement of Issue</b> (Leave blank if no issue was identified.)

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**D.05.c.** Verify that performance measures for ECDA effectiveness have been defined and are monitored. [§192.925, §192.945(b) and NACE RP0502-2002, Section 6]

- i. Verify that at least one additional, randomly selected anomaly location has been excavated for process validation. [NACE RP0502-2002, Section 6.4.2]
- ii. Verify that additional criteria have been established and monitored to evaluate long-term program effectiveness such as those identified in NACE RP0502-2002, Section 6.4.3. [§192.945(b) and NACE RP0502-2002, Section 6.4.3]

<b>D.05.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.05.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.05.d.** Verify the operator's process has incorporated feedback at all appropriate opportunities throughout the ECDA process to demonstrate feedback and continuous improvement. [§192.907(a) and NACE RP0502-2002, Section 6.5]

<b>D.05.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.05.d. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>D.05 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
Appendix H Section H 16	2	9/2009	Post Assessment
Appendix H Section H 17	2	9/2009	Remaining Life Calculations
Appendix H Section H 18	2	9/2009	Reassessment Interval
Appendix H Section H 19	2	9/2009	Assessment of ECDA Effectiveness
Appendix H Section H 20	2	9/2009	Feedback & Continuous Improvement

<b>D.05 Inspection Notes</b>
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**D.05 Inspection Notes**

D.05.a – Reinspection intervals were set within the allowable time limits as defined by NACE RP 0502-2002. Due to no indications of corrosion being observed during the inspections performed in 2010-2011 the reevaluation interval was set at a maximum of 7 years utilizing ECDA.

D.05.b – Reinspection years are defined on Table 3 on page 24 of the plan which is the same schedule from B31.8S – 2004.

D.05.c – Staff's review of digs performed indicate that additional digs were performed on the first time baseline assessments as required in 2010-2011.

D.05.d - The plan has a process for continuous feedback. Located on page 100 in #20 of Appendix H. The plan and processes have been revised due to lessons learned during the initial baseline inspections.

### ***D.06 Dry Gas ICDA Programmatic Requirements***

If the operator elects to use ICDA, verify that the operator develops and implements an ICDA plan in accordance with §192.927.

**D.06.a.** Verify that the operator developed a documented ICDA plan [§192.927(c)]

<b>D.06.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.06.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.06.b.** Verify that the operator's plan contains provisions for carrying out ICDA on the entire pipeline in which covered segments are present, except that application of the remediation criteria of §192.933 may be limited to covered segments. [§192.927(c)(5)(iii)]

<b>D.06.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.06.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.06.c.** Verify that the operator implements the ICDA plan. [§192.927(c)]

<b>D.06.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.06.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>D.06 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
Appendix N	2	9/2009	Internal Corrosion Direct Assessment (ICDA)
Appendix B	2	9/2009	Data Requirements for Transmission Pipelines
Appendix N Section 16 c.	2	9/2009	Actions to be taken if indications of internal corrosion were observed.

<b>D.06 Inspection Notes</b>
<p>D.06 .a – Ameren has a plan that details the ICDA inspection process utilizing Guided Wave in most cases to identify areas of corrosion defined in Appendix N of the plan. Ameren has removed casings where possible and inspected the piping for indications of corrosion. Those that could not be removed were inspected using guided wave in 2010-2011 with no indications of internal corrosion being detected.</p> <p>D.06.b – No indications of internal corrosion have been identified in HCA's on the transmission system transporting dry/pipeline quality gas. Indications of internal corrosion have been identified in the Ameren aquifer storage fields but are outside of the identified HCA's.</p> <p>D.06.c – On piping that has bi-directional flow, two tests were performed at opposite locations where the required piping inclinations were present. There were no reported indications of upsets in the Ameren transmission system in 2010-2011 and no indications of internal corrosion were identified during the ICDA inspections performed.</p>

### ***D.07 Dry Gas ICDA Pre-Assessment, Region Identification, Use of Model & Indirect Inspection***

For dry gas systems, verify that the operator gathers, integrates and analyzes data and information to accomplish pre-assessment objectives and identify ICDA Regions. [§192.927(c)(1), §192.927(c)(2), ASME B31.8S-2004, Section 6.4.2, ASME B31.8S-2004, Appendix A2 and ASME B31.8S-2004, Appendix B2]

**D.07.a.** Verify that the operator's plan defines criteria to be applied in making key decisions (e.g., region identification, feasibility determinations) in implementing the pre-assessment stage of the ICDA process. [§192.927(c)(5)(i)]

<b>D.07.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)
<b>D.07.a. Statement of Issue</b> (Leave blank if no issue was identified.)	

**D.07.b.** Verify that the operator collects, as a minimum, the following **data and information**:

- i. All data elements listed in ASME B31.8S-2004, Appendix A2 [§192.927(c)(1)(i)]
- ii. Information needed to support use of a model to identify areas where internal corrosion is most likely, including locations of all 1) gas input and withdrawal points, 2) low points such as sags, drips, inclines, valves, manifolds, dead-legs, and traps, 3) elevation profile in sufficient detail for angles of inclination to be calculated, and 4) the range of expected gas velocities within the pipeline; [§192.927(c)(1)(ii)]
- iii. Operating experience data that would indicate historic upsets in gas conditions, locations where these upsets have occurred, and potential damage resulting from these upset conditions [§192.927(c)(1)(iii)]
- iv. Information where cleaning pigs may not have been used or where cleaning pigs may deposit electrolytes. [§192.927(c)(1)(iv)]

<b>D.07.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)
<b>D.07.b. Statement of Issue</b> (Leave blank if no issue was identified.)	

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**D.07.c.** Verify that the operator integrates the data collected and uses the integrated data analysis to evaluate and document the following:

- i. Feasibility of performing ICDA on its pipe segments [§192.927(c)(1)]
- ii. Identification of all ICDA Regions and the location of each region. [§192.927(c)(1) & (2)]
- iii. Support use of a model to identify the locations along the pipe segment where electrolyte may accumulate [§192.927(c)(1)]
- iv. Identify areas within the covered segment where liquids may be potentially entrained. [§192.927(c)(1)]

<b>D.07.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.07.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.07.d.** Verify the operator's plan uses the model in GRI 02-0057 ICDA of Gas Transmission Pipelines-Methodology (or equivalent acceptable model) to define critical pipe angle of inclination above which water film cannot be transported by the gas, and that the model considers, as a minimum: [§192.927(c)(2)]

- i. Changes in pipe diameter, [§192.927(c)(2)]
- ii. Locations where gas enters a line, [§192.927(c)(2)]
- iii. Locations down stream of gas draw-offs. [§192.927(c)(2)]
- iv. Other conditions that may result in changes in gas velocity. [§192.927(c)(2) and GRI 02-0057]

<b>D.07.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.07.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.07.e.** Verify that the operator's plan contains provisions for applying more restrictive criteria for pre-assessment and region identification when conducting ICDA for the first time on a covered segment [§192.927(c)(5)(ii)]

<b>D.07.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)

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<b>D.07.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	Not Applicable (explain in summary)

<b>D.07.e. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>D.07 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
Appendix B	2	9/2009	Risk Analysis Process
Appendix N	2	9/2009	Internal Corrosion Direct Assessment (ICDA)

<b>D.07 Inspection Notes</b>
<p>D.07.a-b – During review of ICDA inspections performed in 2010-2011, Staff observed that the operator collects and reviews the required data regarding ICDA testing.</p> <p>D.07.c – Staff’s review of the inspections and testing performed by Ameren indicates they identified the ICDA regions and locations where liquids can accumulate. The operator also identified the pipelines that have bi-directional flow and performed additional testing to cover both ends of the region/segment.</p> <p>D.07.d – The data gathered by Ameren was reviewed to determine locations where ICDA is applicable and includes the required parameters in the flow modeling being utilized.</p> <p>D.07.e – The operator has applied more stringent requirements for the baseline inspections.</p>

### ***D.08 Dry Gas ICDA Direct Examination***

For dry gas systems, verify that the operator (1) identifies locations where internal corrosion is most likely in each ICDA region and (2) performs direct examinations of those locations. [§192.927(b), 192.927(c)(3), ASME B31.8S-2004, Section 6.4 and ASME B31.8S-2004, Appendix B2]

**D.08.a.** Verify that the operator's plan defines criteria to be applied in making key decisions (e.g., identifying locations most likely to have internal corrosion, selection of tools) in implementing the direct assessment stage of the ICDA process. [§192.927(c)(5)(i)]

<b>D.08.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.08.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.08.b.** Verify the operator has identified locations where internal corrosion is most likely to exist in each ICDA region and where electrolyte accumulation is predicted. [§192.927(c)(3), ASME B31.8S-2004, Section 6.4.2 and ASME B31.8S-2004, Appendix B2.3]

<b>D.08.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.08.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.08.c.** Verify the operator requires a direct examination for internal corrosion using ultrasonic thickness measurements, radiography, or other generally accepted measurement technique of those covered segment locations where internal corrosion is most likely to exist, and includes as a minimum, the following: [§192.927(c)(3), ASME B31.8S-2004, Section 6.4.2, ASME B31.8S-2004, Appendix B2.3 and ASME B31.8S-2004, Appendix B2.4]

- i. A minimum of two (2) locations within each ICDA region within a covered segment,
- ii. At least one location must be the low point (e.g., sags, drips, valves, manifolds, dead legs, traps) nearest the beginning of the ICDA region and
- iii. The second location must be further downstream within a covered segment near the end of the ICDA Region (The end of the ICDA region is the farthest downstream location where the ICDA model predicts electrolytes could accumulate based on the critical angle of inclination above which water film cannot be transported by the gas). [§192.927(c)(2) and ASME B31.8S-2004, Appendix B2.3]

<b>D.08.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.08.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.08.d.** If internal corrosion exists at any location directly examined, verify that the operator:  
[192.927(c)(3)]

- i. Evaluates the severity of the defect and remediates the defect per §192.933 (see Protocol E) [§192.927(c)(3)(i)], and
- ii. Either performs additional excavations or performs additional assessment using an allowed alternative assessment method [§192.927(c)(3)(ii)], and
- iii. Evaluates the potential for internal corrosion in all pipeline segments (both covered and non-covered) in the operator's pipeline system with similar characteristics to the ICDA region containing the covered segment in which the corrosion was found and remediates the conditions per §192.933. [§192.927(c)(3)(iii)]

<b>D.08.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
<b>X</b>	Not Applicable (explain in summary)

<b>D.08.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.08.e.** Verify that the operator's plan contains provisions for applying more restrictive criteria for the direct examination when conducting ICDA for the first time on a covered segment [§ 192.927(c)(5)(ii)]

<b>D.08.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.08.e. Statement of Issue</b> (Leave blank if no issue was identified.)



<b>D.08 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
Appendix N	2	9/2009	Internal Corrosion Direct Assessment

<b>D.08 Inspection Notes</b>
<p>D.08.a – Review of the inspection documentation for 2010-2011 indicates Ameren established the locations and performed the required ICDA inspections according to the requirements defined in Appendix N pages 121-126.</p> <p>D.08.b – Ameren utilizes flow models and profile plots to determine areas where the piping inclination could retain moisture.</p> <p>D.08.c – Ameren utilizes Guided Wave to detect internal corrosion and performs wall thickness measurements to ensure the provided data is correct.</p> <p>D.08.d – The inspections performed by the operator in 2010-2011 did not identify indications of internal corrosion. N/A</p> <p>D.08.e – Ameren has applied more restrictive requirements during the initial baseline surveys.</p>

### ***D.09 Dry Gas ICDA Post-Assessment***

For dry gas systems, verify that the operator performs post-assessment evaluation of ICDA effectiveness and continued monitoring of covered segments where internal corrosion has been identified.

[§192.927(c)(4)]

**D.09.a.** Verify that the operator's plan defines criteria to be applied in making key decisions (e.g., reassessment interval determination, techniques for monitoring internal corrosion) in implementing the post-assessment stage of the ICDA process. [§192.927(c)(5)(i)]

<b>D.09.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.09a Statement of Issue</b> (Leave blank if no issue was identified.)

**D.09.b.** Verify the operator has a process for **evaluating the effectiveness** of ICDA as an assessment method and **determining reassessment intervals**. [§192.927(c)(4)(i) and ASME B31.8S-2004, Appendix B2.4]

- i. Verify that if corrosion is found in areas where the pipeline inclination is greater than the estimated critical inclination, that the operator re-evaluates the critical inclination angle and additional new areas are selected for direct examination. [ASME B31.8S-2004, Appendix B2.4]
- ii. Verify the operator's process determines whether a segment must be reassessed at intervals more frequently than those specified in §192.939 using the largest defect most likely to remain in the covered segment as the largest defect discovered in the ICDA segment and estimating the reassessment interval as half the time required for the largest defect to grow to critical size. Verify that this evaluation is to be carried out within one year of completion of the assessment. [§192.927(c)(4)(i) and §192.939(a)(3)]
- iii. Verify the operator's reassessment intervals comply with the following maximum allowed intervals in accordance with 192.939 (see Protocol F). [§192.939(b)]
  1. 10 years for segments operating at SMYS levels greater than 50%
  2. 15 years for segments operating between 30 and 50% SMYS
  3. 20 years for segments operating below 30% SMYS

<b>D.09.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

**D.09.b. Statement of Issue** *(Leave blank if no issue was identified.)*

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**D.09.c.** Verify the operator continually monitors each covered segment where internal corrosion has been identified using techniques such as coupons, UT sensors or electronic probes, periodically drawing off liquids at low points and chemically analyzing them for corrosion products. [§192.927(c)(4)(ii)]

- i. Verify the operator has a process to determine the frequency for monitoring and liquid analysis based on all integrity assessments results conducted in accordance with 192 Subpart O and risk factors specific to the covered segment. [§192.927(c)(4)(ii) and ASME B31.8S-2004, Appendix A2.2]
- ii. Verify the operator's process requires that if any evidence of corrosion products is found in the covered segment, prompt action must be taken including, as a minimum: [§192.927(c)(4)(ii)]
  1. Remediate the conditions the operator finds in accordance with §192.933, and
  2. Implement one of the two following required actions: (1) Conduct excavations of covered segments at locations downstream from where the electrolyte might have entered the pipe, or (2) assess the covered segment using another integrity assessment method allowed by Subpart O.

**D.09.c. Inspection Results** *(Type an X in the applicable box below. Select only one.)*

<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

**D.09.c. Statement of Issue** *(Leave blank if no issue was identified.)*

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**D.09.d.** Verify that the operator's plan contains provisions for applying more restrictive criteria for the post-assessment when conducting ICDA for the first time on a covered segment [§192.927(c)(5)(ii)]

**D.09.d. Inspection Results** *(Type an X in the applicable box below. Select only one.)*

<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

**D.09.d. Statement of Issue** *(Leave blank if no issue was identified.)*

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<b>D.09 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
Appendix N Section J	2	9/2009	7 (2) (e) Post Assessment
Appendix N Section J	2	9/2009	6 (b) Post Assessment when extensive corrosion is identified

<b>D.09 Inspection Notes</b>
<p>D.09.a – The plan defines the process to be utilized to establish the reassessment intervals in Appendix N Section J 7 (a).</p> <p>D.09.b – Effectiveness evaluation of ICDA is defined in Appendix N Section J 7 (2) (e). This also includes determining the reassessment intervals</p> <p>D.09.c – The plan requires continuous monitoring when internal corrosion is found but no indications of internal corrosion were detected in 2010-2011.</p> <p>D.09.d – The plan requires more stringent requirements for the baseline inspection.</p>

### ***D.10 Wet Gas ICDA Programmatic Requirements –***

If the operator elects to use ICDA to assess a covered segment operating with electrolyte present in the gas stream (wet gas), verify that the operator develops and implements an ICDA plan in accordance with §192.927 which addresses the following. [§192.927(b)]

**D.10.a.** Verify that the operator developed a documented ICDA plan which demonstrates how the operator will conduct ICDA on the entire pipeline in which covered segments are present to effectively address internal corrosion. [§192.927(c)]

<b>D.10.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>D.10.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.10.b.** Verify the operator has provided notification to PHMSA, and applicable state or local safety authorities, of an ICDA wet gas "other technology" application in accordance with §192.921 (a) (4) or §192.937 (c) (4). [§192.927(b)]

<b>D.10.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>D.10.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>D.10 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
II. Pipeline Integrity Management Plan Section P	2	6/2009	Low Stress Reassessments – Gas sampling at the storage fields downstream of the dehydration facilities.

<b>D.10 Inspection Notes</b>
Wet Gas is not applicable as Ameren is only transporting dry gas in the transmission system. They are monitoring for upsets. At this time there are no HCA's – identified sites in the storage fields. Page 29-30 of the plan.



### ***D.11 SCCDA Data Gathering & Evaluation***

If the operator elects to use SCCDA, verify that the operator's SCCDA evaluation process complies with ASME B31.8S-2004, Appendix A3 in order to identify whether conditions for SCC of gas line pipe are present and to prioritize the covered segments for assessment. [§192.929(b)(1)]

**D.11.a.** Verify that the operator has a process to **gather, integrate, and evaluate data** for all covered segments to identify whether the conditions for SCC are present and to prioritize the covered segments for assessment. [§192.929(b)(1)]

- i. Verify that the operator's process gathers and evaluates data related to SCC at all sites it excavates during the conduct of its pipeline operations (not just covered segments) where the criteria indicate the potential for SCC. [§192.929(b)(1) and ASME B31.8S-2004, Appendix A3.3]
- ii. Verify that the data includes, as a minimum, the data specified in ASME B31.8S-2004, Appendix A3.
- iii. Verify that the operator addresses missing data by either using conservative assumptions or assigning a higher priority to the segments affected by the missing data, as required by ASME B31.8S-2004, Appendix A3.2.

<b>D.11.a. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>D.11.a. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>D.11 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
Appendix O	2	9/2009	Stress Corrosion Cracking Direct Assessment (SCCDA)

<b>D.11 Inspection Notes</b>
D.11 - After completing the 2011 inspections, no stress cracking corrosion has been detected on Ameren Pipelines prior to or after initiating the Pipeline Integrity Program.

### ***D.12 SCCDA Assessment, Examination, & Threat Remediation***

Verify that covered segments (for which conditions for SCC are identified) are assessed, examined, and the threat remediated. [§192.929(b)(2)]

**D.12.a.** Verify that, if conditions for SCC are present, that the operator **conducts an assessment** using one of the methods specified in ASME B31.8S-2004, Appendix A3.

<b>D.12.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.12.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.12.b.** Verify that the operator's plan specifies an acceptable **inspection, examination, and evaluation plan** using either the Bell Hole Examination and Evaluation Method (that complies with all requirements of ASME B31.8S-2004, Appendix A3.4 (a)) or Hydrostatic Testing (that complies with all requirements of ASME B31.8S-2004, Appendix A3.4 (b)).

- i. Verify, that the operator's plan requires that for pipelines which have experienced an in-service leak or rupture attributable to SCC, that the particular segment(s) be subjected to a hydrostatic pressure test (that complies with ASME B31.8S-2004, Appendix A3.4 (b)) within 12 months of the failure, using a documented hydrostatic retest program developed specifically for the affected segment(s), as required by ASME B31.8S-2004, Appendix A3.4.

<b>D.12.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>D.12.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**D.12.c.** Verify that assessment results are used to determine **reassessment intervals** in accordance with §192.939(a)(3); (see Protocol F). [§192.939(a)(3)]

<b>D.12.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)



<b>D.12.c. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>D.12 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
Section F	2	6/2009	Threats applied to establish the Baseline Assessment Plan
Appendix B	2	9/2009	Risk Analysis Process Stress Cracking Corrosion
Appendix O	2	9/2009	Stress Corrosion Cracking Direct Assessment (SCCDA)

<b>D.12 Inspection Notes</b>
<p>D.12 - Stress cracking corrosion is a threat applied by Ameren to calculate risk factors for the baseline assessment plan. There have been no indications of or a failure due to stress cracking corrosion in the Ameren transmission system as of the inspections performed up to the end of 2011.</p> <p>D.12.b – The plan has adequate requirements for assessing and identifying stress cracking corrosion.</p>

## Protocol Area E. Remediation

- [E.01](#) Program Requirements for Discovery, Evaluation and Remediation Scheduling
- [E.02](#) Program Requirements for Identifying Anomalies
- [E.03](#) Operator Response when Timelines for Evaluation and Remediation Cannot be Met
- [E.04](#) Record Review for Discovery, Repair and Remediation Activities
- [Table of Contents](#)

### ***E.01 Program Requirements for Discovery, Evaluation and Remediation Scheduling***

Verify that provisions exist to discover and evaluate all anomalous conditions resulting from integrity assessment and remediate those which could reduce a pipeline's integrity. [§ 192.933(a)]

**E.01.a.** Verify a definition of discovery is provided. [§ 192.933(b)]

<b>E.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)
<b>E.01.a. Statement of Issue</b> (Leave blank if no issue was identified.)	

**E.01.b.** Verify a requirement exists to document the actual date of discovery. [§ 192.933(b)]

<b>E.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)
<b>E.01.b. Statement of Issue</b> (Leave blank if no issue was identified.)	

**E.01.c.** Verify a requirement exists to develop a schedule that prioritizes evaluation and remediation of anomalous conditions. [§ 192.933(c)]

<b>E.01.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.01.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.01.d.** If the operator desires to deviate from the timelines for remediation as provided in § 192.933 by demonstrating exceptional performance, verify that the requirements of § 192.913(b) have been met and the safety of the covered segment is not jeopardized. [§ 192.913(c)(2)](See Protocol F.05)

<b>E.01.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)
<input type="checkbox"/> No Issues Identified
<input type="checkbox"/> Potential Issues Identified (explain in summary)
<input checked="" type="checkbox"/> Not Applicable (explain in summary)

<b>E.01.d. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>E.01 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
Section K	2	6/2009	#4 of the Remedial Action Plan – Discovery of Condition Page 19
Section L	2	6/2009	Scheduling Remedial Action and Defect Remediation Schedule page 19-22

<b>E.01 Inspection Notes</b>
<p>E.01.a – A definition of Discovery is included in the plan on page 19.</p> <p>E.01.b – Staff’s review of ECDA inspections determines the indications were inspected within the required intervals as defined by the IM requirements and the requirements of the Ameren Plan. In 2010 -2011 there were no indications that were identified as an immediate indication. Ameren utilized the highest priority classifications when selecting the required dig locations for piping evaluations.</p> <p>E.01.c – Ameren establishes a dig schedule after receiving the results of the ECDA surveys. The digs were performed within the limitations as defined by their remediation plan.</p> <p>E.01.d – Exceptional performance is not being utilized by Ameren to deviate from timelines for remediation.</p>

## *E.02 Program Requirements for Identifying Anomalies*

Inspect the operator's program to verify that provisions exist for the classification and remediation of anomalies that meet the criteria for: (1) Immediate repair conditions; (2) One-year conditions; (3) Monitored conditions; or (4) Other conditions as specified in ASME B31.8S-2004, Section 7 . [§192.933(c) and §192.933(d)]

**E.02.a.** Verify the program requires a temporary pressure reduction or the pipeline to be shut down upon discovery of all immediate repair conditions. [§ 192.933(d)(1)]

E.02.a. Inspection Results (Type an X in the applicable box below. Select only one.)	
X	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

  

E.02.a. Statement of Issue (Leave blank if no issue was identified.)

**E.02.b.** Verify provisions exist to classify and categorize anomalies meeting the following criteria:

- i. Immediate Repair Conditions (Conditions requiring immediate remediation actions)
  - 1. Calculated remaining strength indicates a failure pressure that is less than or equal to 1.1 times MAOP; [§ 192.933(d)(1)]
  - 2. A dent having any indication of metal loss, cracking, or a stress riser; [§ 192.933(d)(1)]
  - 3. An indication or anomaly that is judged by the person designated by the operator to evaluate assessment results as requiring immediate action. [§ 192.933(d)(1)]
  - 4. Metal-loss indications affecting a detected longitudinal seam if that seam was formed by direct current or low-frequency electric resistance welding or by electric flash welding; [ASME B31.8S-2004, Section 7.2.1]
  - 5. All indications of stress corrosion cracks; [ASME B31.8S-2004, Section 7.2.2]; or
  - 6. Any indications that might be expected to cause immediate or near-term leaks or ruptures based on their known or perceived effects on the strength of the pipeline. [ASME B31.8S-2004, Section 7.2.3]
- ii. One-Year Conditions (Conditions requiring remediation within one year of discovery).
  - 1. A smooth dent located between the 8 and 4 o'clock positions (upper 2/3 of the pipe) with a depth greater than 6% of the pipeline diameter; [§ 192.933(d)(2)] or,
  - 2. A dent with a depth greater than 2% of the pipeline's diameter, that affects pipe curvature at a girth weld or at a longitudinal seam weld. [§ 192.933(d)(2)]
- iii. Monitored Conditions (Conditions which must be monitored until the next assessment).
  - 1. A dent with a depth greater than 6% of the pipeline diameter located between the 4 and 8 o'clock position (lower 1/3) of the pipe; [§ 192.933(d)(3)]
  - 2. A dent located between the 8 and 4 o'clock position (upper 2/3) of the pipe with a depth greater than 6% of the pipeline diameter, and engineering analysis to demonstrate critical strain levels are not exceeded; [§ 192.933(d)(3)] or,
  - 3. A dent with a depth greater than 2% of the pipeline diameter, that affects pipe curvature at a girth weld or a longitudinal seam weld, and engineering analysis of the dent and girth or seam weld to demonstrate critical strain levels are not exceeded. [§ 192.933(d)(3)]

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<b>E.02.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.02.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.02.c.** Verify provisions exist to record and monitor anomalies that are classified as "monitored conditions" during subsequent risk or integrity assessments for any change in their status that would require remediation. [§192.933(d)(3)]

<b>E.02.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.02.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.02.d.** Verify that program requirements exist to meet the provisions of ASME B31.8S-2004, Section 7, Figure 4 for scheduling and remediating any other threat conditions that do not meet the classification criteria of Protocol E.02.b, above. [§192.933(c)]

<b>E.02.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.02.d. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>E.02 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
II. Pipeline Integrity Management Plan Section L	2	6/2009	Scheduling Remedial Action Page 19-21
II. Pipeline Integrity Management Plan Section L	2	6/2009	Defect Remediation Schedule Page 21-22
II. Pipeline Integrity	2	6/2009	Continuing Evaluation and Assessment Plan Page 22-24

<b>E.02 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
Management Plan Section M			
II. Pipeline Integrity Management Plan Section L	2	6/2009	#2 Schedule Remedial Action Chart for timing scheduled responses. Page 20

<b>E.02 Inspection Notes</b>
<p>E.02.a – Temporary pressure reductions are a requirement defined on page 21 of the plan under Immediate Conditions. In 2010-2011 there were no immediate conditions reported to Ameren by the contractors performing the ECDA surveys. Staff's review of the ECDA surveys performed in 2010-2011 determined that the only indications detected were classified as monitor or scheduled.</p> <p>E.02.b – No dents meeting the one year requirement or indications of corrosion were observed during the inspections performed in 2012-2011. The most severe indications of coating flaws were inspected and indicate no corrosion resulting in wall loss was observed.</p> <p>E.02.c – Monitor indication documentation is being retained by Ameren and the plan requires the results to be compared to subsequent inspections to determine if the indications require further remediation due to changes in classification.</p> <p>E.02.d – Ameren has included the chart identified as Figure 4 in the plan from ASME B31.8S 2004 Edition used to schedule and remediate identified threats. Page 40 of the plan.</p>

### ***E.03 Operator Response when Timelines for Evaluation and Remediation Cannot be Met***

Verify that provisions exist to respond appropriately when the operator is unable to meet time limits for evaluation and remediation. [§192.933(a)].

**E.03.a.** Verify a requirement exists to take a temporary operating pressure reduction or other action that ensures safety of the covered segment in the event the operator is unable to respond within the timeframes required by §192.933. [§192.933(a)]

- i. Verify a requirement exists to determine the appropriate pressure reduction using ASME B31G, or "RSTRENG", or reduce pressure to a level not exceeding 80% of the level at the time the condition was discovered. [§192.933(a)]
- ii. Verify a requirement exists that when a pressure reduction is to exceed 365 days, a documented technical justification is developed that explains the reason for remediation delay and demonstrates continuation of the reduction will not jeopardize pipeline integrity. [§192.933(a)]

<b>E.03.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.03.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.03.b.** Verify a requirement exists to document the justification, when an evaluation and remediation activity cannot be completed within established timeframe requirements, that includes the reasons why the schedule cannot be met and the basis for why the changed schedule will not jeopardize public safety. [§192.933(a) and §192.933(c)]

<b>E.03.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.03.b. Statement of Issue</b> (Leave blank if no issue was identified.)

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**E.03.c.** Verify a requirement exists to notify PHMSA in accordance with §192.949 and the State pipeline safety authority, if applicable, when:

- i. the operator cannot meet the evaluation and remediation schedule and cannot provide a temporary reduction in operating pressure or other action [§192.933(a)(1) and §192.933(c)], and
- ii. a pressure reduction exceeds 365 days. [§192.933(a)(2)]

The notification is to include the documented justification under protocols E.03.a and E.03.b.

<b>E.03.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.03.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>E.03 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
II. Pipeline Integrity Management Plan Section L	2	6/2009	#3 - If remedial action repairs cannot meet the schedule. Page 20

<b>E.03 Inspection Notes</b>
E.03.a-c – Ameren has a procedure in the plan but did not encounter conditions where the repair could not be completed within the required timeline in 2010-2011. If this did occur the plan requires for the ICC and PHMSA to be notified and take the necessary actions to provide safety to the public. The plan states Ameren would use temporary pressure reductions or increased patrols.



### ***E.04 Record Review for Discovery, Repair and Remediation Activities***

Inspect operator repair and remediation records to verify that remediation activities have been conducted in accordance with program requirements. [§192.933]

**E.04.a.** Verify a prioritized schedule exists for evaluation and remediation of anomalies identified during assessment or reassessment activities. The prioritized schedule must document which of the criteria specified in §192.933(d) and/or ASME B31.8S-2004 were used as the basis for the schedule. [§192.933(c) and §192.933(d)]

<b>E.04.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.04.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.04.b.** Verify anomaly discovery was documented within 180 days of completion of the assessment or reassessment, or else that compliance with the 180-day period was impracticable. [§192.933(b)]

<b>E.04.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.04.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.04.c.** Verify any remediation activities taken are sufficient to ensure that the anomaly is unlikely to threaten the integrity of the pipeline before the next scheduled reassessment. [§192.933(a)]

<b>E.04.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>E.04.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.04.d.** Verify, for any immediate repair anomalies, a temporary pressure reduction is taken by the operator on the pipeline and the reduced pressure is determined in accordance with ASME B31G, or "RSTRENG", or that the reduced pressure does not exceed 80% of the level at the time the condition was discovered. [§192.933(a)]

<b>E.04.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>E.04.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.04.e.** Verify immediate repair conditions have been evaluated and remediated on a schedule established in accordance with the provisions of ASME B31.8S-2004, Section 7. [§192.933(d)(1)]

<b>E.04.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>E.04.e. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.04.f.** Verify any pressure reduction taken has not exceeded 365 days from the date of discovery unless:

- a technical justification has been developed that explains the reason for remediation delay and demonstrates that continuation of the pressure reduction will not jeopardize the integrity of the pipeline [§192.933(a)], and
- PHMSA and the State pipeline safety authority, if applicable, have been notified in accordance with §192.949. [§192.933(a)]

<b>E.04.f. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>E.04.f. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.04.g.** Verify that remediation activities were completed in accordance with scheduled timeframes. [§192.933(c) and §192.933(d)]

<b>E.04.g. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<input checked="" type="checkbox"/>	No Issues Identified
<input type="checkbox"/>	Potential Issues Identified (explain in summary)
<input type="checkbox"/>	Not Applicable (explain in summary)

<b>E.04.g. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.04.h.** Verify that anomalies meeting any of the criteria of §192.933(d)(3) as "monitored conditions" are evaluated during subsequent risk and integrity assessments to identify any change that may require remediation and that any required remediation is scheduled and implemented in accordance with the applicable requirements of §192.933 and ASME B31.8S-2004. [§192.933(d)]

<b>E.04.h. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<input checked="" type="checkbox"/>	No Issues Identified
<input type="checkbox"/>	Potential Issues Identified (explain in summary)
<input type="checkbox"/>	Not Applicable (explain in summary)

<b>E.04.h. Statement of Issue</b> (Leave blank if no issue was identified.)

**E.04.i.** Verify any remediation activities that have not been completed in accordance with §192.933 timeframes, and the operator has not provided safety through a temporary pressure reduction:

- i. have technical justifications that include the reasons why the schedule cannot be met and the basis for why the changed schedule will not jeopardize public safety, and
- ii have been reported to PHMSA and appropriate State authorities in accordance with the requirements of §192.933(c) of the rule. [§192.933(c)]

<b>E.04.i. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<input type="checkbox"/>	No Issues Identified
<input type="checkbox"/>	Potential Issues Identified (explain in summary)
<input checked="" type="checkbox"/>	Not Applicable (explain in summary)

<b>E.04.i. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>E.04 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
II. Pipeline Integrity Management Plan Section L	2	6/2009	Defect Remediation Schedule Page 21-22
II. Pipeline Integrity Management Plan Section L	2	6/2009	Continuing evaluation and Assessment Plan Page 22-24

<b>E.04 Inspection Notes</b>
<p>E.04.a – The reports received due to the surveys performed were used to establish what indications were to be inspected by performing digs. The most severe indications were adequately prioritized and were used for dig locations.</p> <p>E.04.b – Anomalies were documented within the 180 day requirement as defined in the Ameren plan and Federal Code.</p> <p>E.04.c – No anomalies were identified that required corrective actions or repairs other than coating. No indications of external corrosion were observed during the inspections performed in 2010-2011.</p> <p>E.04.d – No pressure reductions were required to be performed as no immediate indications were detected during the surveys performed in 2010-2011.</p> <p>E.04.e – There were no immediate repair conditions identified during the 2010-2011 inspections. N/A</p> <p>E.04.f – No pressure reductions were required due to remediation of an anomaly in 2010-2011. N/A</p> <p>E.04.g – Inspections were performed within the required time frames and any actions required were completed within acceptable timelines. A new rectifier installation and bonds was installed near the Hoffman Station at the NGPL Take point. This was due to low potential levels observed during the CIS survey. This area was not in an HCA but corrective actions were taken due to the information received from the CIS survey.</p> <p>E.04.h – The surveys that were subsequent (second survey of the same pipeline) had no indications that required any further actions to be taken due to an increase in classification.</p> <p>E.04.i – There were no remediation intervals that exceeded the required time frames in the 2010-2011 inspections reviewed. N/A</p>

## Protocol Area F. Continual Evaluation and Assessment

- [F.01](#) Periodic Evaluations
- [F.02](#) Reassessment Methods
- [F.03](#) Low Stress Reassessment
- [F.04](#) Reassessment Intervals
- [F.05](#) Deviation from Reassessment Requirements
- [F.06](#) Waiver from Reassessment Interval
- [Table of Contents](#)

### ***F.01 Periodic Evaluations***

Verify the operator conducts a periodic evaluation of pipeline integrity based on data integration and risk assessment to identify the threats specific to each covered segment and the risk represented by these threats. [§192.917 and §192.937(b)]

**F.01.a.** Verify that periodic evaluations are conducted based on a data integration and risk assessment of the entire pipeline as specified in §192.917. The evaluation must consider the following: [§192.937(b) and 192.917]

- i. Past and present assessment results
- ii. Data integration and risk assessment information [§192.917]
- iii. Decisions about remediation [§192.933]
- iv. Additional preventive and mitigative actions [§192.935]

<b>F.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>F.01.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.01.b.** Verify that periodic evaluations of data are thorough, complete, and adequate for establishing reassessment methods and schedules. [§192.937(b)]

<b>F.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>F.01.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.01.c.** Verify that an appropriate interval is established for performing required periodic evaluations of threats and pipeline conditions following completion of the baseline assessment. [§192.937(b)]

<b>F.01.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>F.01.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.01.d.** Verify that the operator periodically reviews the evaluation results to determine if the new information warrants changes to reassessment intervals and/or methods, and makes changes as appropriate. [§192.937]

<b>F.01.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>F.01.d. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>F.01 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
V.	2	9/2009	Quality Control Plan
IV.	2	9/2009	Performance Measure Plan
IV. Section D	2	6/2009	Threat Information Analysis Review
		12/2012	Baseline Plan list

<p><b>F.01 Inspection Notes</b></p> <p>F.01.a – The above requirements are defined in the Quality Control and Performance Measures sections of the plan. Ameren performs reviews of completed inspections to ensure they are completed as required and review the results to ensure sufficient corrective actions have been taken on indications detected. In 2010-2011 no indications were observed that required reductions in pressure or piping revisions. No corrosion was detected that required performing B31.G analysis.</p> <p>F.01.b – Ameren perform reviews of data to ensure the program is working and no issues with inspection process are observed.</p> <p>F.01.c – The Threat Matrix was evaluated semi-annually in 2010-2011.</p> <p>F.01.d – At a minimum, annual reviews were completed prior to reporting the prior year inspection findings to</p>
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<b>F.01 Inspection Notes</b>
PHMSA and the ICC to ensure the data is accurate.

## ***F.02 Reassessment Methods***

Verify that the approach for establishing the reassessment method is consistent with the requirements in §192.937(c). [§192.937(c) and §192.941]

**F.02.a.** Verify that one or more of the following assessment methods (depending on the applicable threats) are specified:

- i. An internal inspection tool(s) capable of detecting corrosion and any other threats that the operator intends to address using this tool(s). The process must follow ASME B31.8S-2004, Section 6.2, in selecting the appropriate inspection tool. [§192.937(c)(1)]
- ii. A pressure test conducted in accordance with Subpart J. An operator must use the test pressures specified in ASME B31.8S-2004, Section 5, Table 3, to justify an extended reassessment interval in accordance with §192.939. Pressure test is appropriate for threats as defined in ASME B31.8S-2004, Section 6.3. [§192.937(c)(2)]
- iii. Direct assessment – refer to Protocol D. [§192.937(c)(3)]
- iv. Other technology that an operator demonstrates can provide an equivalent understanding of the condition of the pipe. If other technology is the method selected, the process should require that the operator notify PHMSA at least 180 days before conducting the assessment, in accordance with §192.949. Also, verify that notification to a State or local pipeline safety authority is required when either a covered segment is located in a State where PHMSA has an interstate agent agreement, or an intrastate covered segment is regulated by that State. [§192.937(c)(4)]
- v. Confirmatory direct assessment when used on a covered segment that is scheduled for a reassessment period longer than seven years. Refer to Protocol G. [§192.937(c)(5)]
- vi. If the operator is using "low stress reassessment" method, evaluate the process using Protocol F.03.

<b>F.02.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>F.02.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.02.b.** Review the methods selected for reassessments and verify that they are appropriate for the identified threats.

<b>F.02.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)



<b>F.02.b. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>F.02 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
I. Pipeline Integrity Management Plan - Section M	2	6/2009	Continuing Evaluation and Assessment Plan

<b>F.02 Inspection Notes</b>
F.02.a-b - Reassessments performed in 2010 and 2011 were ECDA assessments and was the process was utilized during the first/baseline inspections. Ameren is reviewing using ECDA on the HCA segments that are currently being inspected using inline tools to locate possible construction related conditions where the coating may have been damaged but no wall loss/corrosion has occurred.

### ***F.03 Low Stress Reassessment***

For pipelines operating at < 30% SMYS, the operator may choose to use a "low stress reassessment" method to address threats of external and internal corrosion. If this method is used, verify that the operator addresses the following requirements [§192.941]:

**F.03.a.** Verify that the operator completes a baseline assessment on the covered segment prior to implementing the "low stress reassessment" method. [§192.941(a)]

<b>F.03.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>F.03.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.03.b.** If used to address external corrosion, verify that the operator has incorporated the following:

- i. If the pipe is cathodically protected, electrical surveys (i.e., indirect examination tool/method) must be performed at least every 7 years. The operator must use the results of each survey as part of an overall evaluation of the cathodic protection and corrosion threat for covered segments. This evaluation must consider, at a minimum, the leak repair and inspection records, corrosion monitoring records, exposed pipe records, and the pipeline environment. [§192.941(b)(1)]
- ii. If the pipe is unprotected or cathodically protected where electrical surveys are impractical, the operator must require (1) the conduct of leakage surveys as required by §192.706, at 4-month intervals; and (2) the identification and remediation of areas of active corrosion every 18 months by evaluating leak repair and inspection records, corrosion monitoring records, exposed pipe records, and the pipeline environment. [§192.941(b)(1)]

<b>F.03.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>F.03.b. Statement of Issue</b> (Leave blank if no issue was identified.)

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**F.03.c.** If used to address internal corrosion, verify that the operator has incorporated all of the following:

- i. Gas analysis for corrosive agents must be performed at least once each calendar year. [§192.941(c)(1)]
- ii. Periodic testing of fluids removed from the segment must be conducted. At least once each calendar year the operator must test the fluids removed from each storage field that may affect a covered segment. [§192.941(c)(2)]
- iii. At least every seven (7) years, the operator must integrate data from the analysis and testing required by c.i and c.ii above with applicable internal corrosion leak records, incident reports, and test records, and define and implement appropriate remediation actions. [§192.941(c)(3)]

<b>F.03.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>F.03.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>F.03 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
I – Section M	2	6/2009	Continuing Evaluation and Assessment Plan
Table 3	2	6/2009	Reassessment Requirements

<b>F.03 Inspection Notes</b>
F.03.a-c – Ameren has not implemented the low stress reassessment and they have conducted similar inspections as were performed during the prior baseline inspection on a 7 year maximum interval. Ameren indicates in the plan they have reserved the right to initiate the low stress reassessment plan if warranted but has not adopted the process as of the end of the 2011 inspections. Page 22-23 of the plan.

### ***F.04 Reassessment Intervals***

Verify that the requirements for establishing the reassessment intervals are consistent with section §192.939 and ASME B31.8S-2004. [§192.937(a), §192.939(a), §192.939(b), §192.913(c), and ASME B31.8S-2004, Section 5, Table 3]

**F.04.a.** Verify that the operator reassesses covered segments on which a baseline assessment was conducted during the baseline period specified in subpart 192.921(d) by no later than seven years after the baseline assessment of that covered segment unless the reassessment evaluation (refer to Protocol F.01) indicates an earlier reassessment. [§192.937(a)]

<b>F.04.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>F.04.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.04.b.** For pipelines operating at or above 30% SMYS, verify that the operator meets the following requirements:

- i. If the operator establishes a reassessment interval greater than seven (7) years, a confirmatory direct assessment (refer to Protocol G) must be performed at intervals not to exceed seven (7) years followed by a reassessment at the interval established by the operator (refer below). [§192.939(a)]
- ii. Unless a deviation is permitted under §192.913(c), the maximum reassessment interval shall not exceed the values listed in the §192.939(b) table. [§192.937(a)]
- iii. If the reassessment method is a pressure test, ILI, or other equivalent technology, the interval must be based on either: (1) the identified threat(s) for the covered segment (see §192.917) and on the analyses of the results from the last integrity assessment, and a review of data integration and risk assessment; or (2) using the intervals specified for different stress levels of pipeline listed in ASME B31.8S-2004, Section 5, Table 3. An operator must use the test pressures specified in ASME B31.8S-2004, Section 5, Table 3, to justify an extended reassessment interval in accordance with §192.939. [§192.939(a)(1)]
- iv. If the reassessment method is external corrosion direct assessment, internal corrosion direct assessment, or SCC direct assessment refer to Protocol D for evaluating the operator's interval determination.

<b>F.04.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

**F.04.b. Statement of Issue** *(Leave blank if no issue was identified.)*

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**F.04.c.** For pipelines operating < 30% SMYS, verify that the operator selects one of the following reassessment approaches:

- i. Reassessment by pressure test, internal inspection or other equivalent technology following the requirements in § 192.939(a)(1) except that the stress level referenced in § 192.939(a)(1)(ii) would be adjusted to reflect the lower operating stress level. However, if an established interval is more than seven (7) years, the operator must conduct at seven (7) year intervals either a confirmatory direct assessment in accordance with § 192.931, or a low stress reassessment in accordance with § 192.941. An operator must use the test pressures specified in ASME B31.8S-2004, Section 5, Table 3, to justify an extended reassessment interval in accordance with § 192.939.[§ 192.939(b)(1)]
- ii. Reassessment by external corrosion direct assessment, internal corrosion direct assessment, or SCC direct assessment. Refer to Protocol D for evaluating the operator's interval determination. [§ 192.939(b)(2), § 192.939(b)(3) and § 192.939(b)(4)]
- iii. Reassessment by confirmatory direct assessment at seven year intervals in accordance with subpart 192.931, with reassessment by one of the methods listed in § 192.939(b)(1) – § 192.939(b)(3) by year 20 of the interval. [§ 192.939(b)(4)]
- iv. Reassessment by the "low stress method" at 7-year intervals in accordance with § 192.941 with reassessment by one of the methods listed in § 192.939(b)(1) through § 192.939(b)(3) by year 20 of the interval. [§ 192.939(b)(5)]

**F.04.c. Inspection Results** *(Type an X in the applicable box below. Select only one.)*

<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

**F.04.c. Statement of Issue** *(Leave blank if no issue was identified.)*

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**F.04.d.** Verify that a covered segment on which a prior assessment was credited as a baseline assessment under subpart § 192.921(e) is required to be reassessed by no later than December 17, 2009. [§ 192.937(a)]

**F.04.d. Inspection Results** *(Type an X in the applicable box below. Select only one.)*

	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
<b>X</b>	Not Applicable <i>(explain in summary)</i>

<b>F.04.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.04.e.** Verify that reassessment intervals are appropriate and that adequate documentation and technical bases support the intervals selected.

<b>F.04.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>F.04.e. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>F.04 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
		12/2012	Baseline Assessment Plan/List
II. Pipeline Integrity Management Plan Table 3	2	6/2009	Reassessment Requirement Table

<b>F.04 Inspection Notes</b>
<p>F.04. a – Reassessment intervals were maintained at a 7 year maximum with some being performed more frequently than 7 years.</p> <p>F.04.b – No reassessment intervals on completed or projected inspections were more than 7 years.</p> <p>F.04.c – Reassessments performed in 2010-2011 were completed using ECDA processes. No ILI or pressure testing was utilized by Ameren for reassessments.</p> <p>F.04.d - Ameren did not utilize prior assessments to establish baseline assessments. N/A</p> <p>F.04.e – Review of the reassessments performed in 2010-2011 indicate adequate reassessment intervals were established at 7 years and the same types of assessments were utilized as in the baseline assessments.</p>

### ***F.05 Deviation from Reassessment Requirements***

If the operator elects to deviate from certain requirements listed in §192.913(c), verify that the operator uses a performance based approach that satisfies the requirements for exceptional performance as follows: [§192.913 and ASME B31.8S-2004]

**F.05.a.** Verify that the operator has a performance based integrity management program that meets or exceeds the performance-based requirements of ASME B31.8S-2004 and includes, at a minimum, the following elements: [§192.913(a)]

- i. A comprehensive process for risk analysis;
- ii. All risk factor data used to support the program;
- iii. A comprehensive data integration process;
- iv. A procedure for applying lessons learned from assessment of covered pipeline segments to pipeline segments not covered by this subpart;
- v. A procedure for evaluating every incident, including its cause, within the operator's sector of the pipeline industry for implications both to the operator's pipeline system and to the operator's integrity management program;
- vi. A performance matrix that demonstrates the program has been effective in ensuring the integrity of the covered segments by controlling the identified threats to the covered segments (Refer to Protocol I);
- vii. Semi-annual performance measures beyond those required in §192.943 that are part of the operator's performance plan. [See §192.911(i)] Refer to Protocol I.
- viii. An analysis that supports the desired integrity reassessment interval and the remediation methods to be used for all covered segments.

<b>F.05.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>F.05.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.05.b.** Verify that the operator has completed at least two integrity assessments on each covered pipeline segment the operator is including under the performance-based approach and is able to demonstrate that each assessment effectively addressed the identified threats on the covered segments. [§192.913(b)(2)(i)]

<b>F.05.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>F.05.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.05.c.** Verify the operator has remediated anomalies identified in the more recent assessment per the requirements of §192.933. [§192.913(b)(2)(ii)]

<b>F.05.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)
<input type="checkbox"/> No Issues Identified
<input type="checkbox"/> Potential Issues Identified (explain in summary)
<input checked="" type="checkbox"/> Not Applicable (explain in summary)

<b>F.05.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.05.d.** Verify the operator has incorporated the results and lessons learned from the more recent assessment into the operator's data integration and risk assessment. [§192.913(b)(2)(ii)]

<b>F.05.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)
<input type="checkbox"/> No Issues Identified
<input type="checkbox"/> Potential Issues Identified (explain in summary)
<input checked="" type="checkbox"/> Not Applicable (explain in summary)

<b>F.05.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**F.05.e.** Verify that deviations are allowed only for the timeframe for reassessment as provided in §192.939 except that reassessment by some method allowed by Subpart O (e.g., confirmatory direct assessment) must be completed at intervals not to exceed seven (7) years. [§192.913(c)(1)]

<b>F.05.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)
<input type="checkbox"/> No Issues Identified
<input type="checkbox"/> Potential Issues Identified (explain in summary)
<input checked="" type="checkbox"/> Not Applicable (explain in summary)

<b>F.05.e. Statement of Issue</b> (Leave blank if no issue was identified.)



<b>F.05 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
I. Pipeline Integrity Management Plan Section M	2	6/2009	#5 Continuing Evaluation and Assessment Plan (Justification of Longer Assessment Intervals)

<b>F.05 Inspection Notes</b>
<p>F.05.a-e – Ameren has not deviated from the reassessment requirements. They have maintained a maximum interval of 7 years on the reassessments that have been completed or projected as of 2012. The plan does have the required procedures to allow for deviations. Page 22-23 of the plan.</p>

### ***F.06 Waiver from Reassessment Interval***

Verify that the operator's program requires that it apply for a waiver, should it become necessary, from the required reassessment interval. The waiver request must demonstrate that the waiver is justified as specified in the rule. Such a waiver request may only be made in the following limited situations: [§ 192.943]

#### **F.06.a.** Lack of internal inspection tools. [§ 192.943(a)(1)]

<b>F.06.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<input checked="" type="checkbox"/>	No Issues Identified
<input type="checkbox"/>	Potential Issues Identified (explain in summary)
<input type="checkbox"/>	Not Applicable (explain in summary)
<b>F.06.a. Statement of Issue</b> (Leave blank if no issue was identified.)	

#### **F.06.b.** Cannot maintain local product supply. [§ 192.943(a)(2)]

<b>F.06.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<input checked="" type="checkbox"/>	No Issues Identified
<input type="checkbox"/>	Potential Issues Identified (explain in summary)
<input type="checkbox"/>	Not Applicable (explain in summary)
<b>F.06.b. Statement of Issue</b> (Leave blank if no issue was identified.)	

**F.06.c.** Application must be made at least 180 days before the end of the required reassessment interval. (Exception: If local product supply issues make the 180 day submittal impractical, an operator must apply for the waiver as soon as the need for waiver becomes known). [§ 192.943(b)]

<b>F.06.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<input checked="" type="checkbox"/>	No Issues Identified
<input type="checkbox"/>	Potential Issues Identified (explain in summary)
<input type="checkbox"/>	Not Applicable (explain in summary)
<b>F.06.c. Statement of Issue</b> (Leave blank if no issue was identified.)	

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<b>F.06 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
I. Pipeline Integrity Management Plan Section M	2	6/2009	#5 Continuing Evaluation and Assessment Plan

<b>F.06 Inspection Notes</b>
F.06.a-c – Ameren has not had to apply for a waiver for extension for reassessment as of 2012 but a procedure is defined in the plan on Page 23.

## Protocol Area G. Confirmatory DA

- [G.01](#) Confirmatory Direct Assessment, CDA
- [Table of Contents](#)

### ***G.01 Confirmatory Direct Assessment, CDA***

If using confirmatory direct assessment (CDA) as allowed in §192.937, verify that the operator's integrity management plan meets the requirements of §192.931, §192.925 (ECDA) and §192.927 (ICDA).  
[§192.931]

**G.01.a.** Verify that the operator's CDA plan for external corrosion complies with all of the requirements contained in §192.925 (See Protocol D.01 ~ Protocol D.05) with the following exceptions, [§192.931(b) and §192.925]

- The procedures for indirect examination may allow use of only one indirect examination tool suitable for the application
- The procedures for direct examination and remediation must provide that all immediate action indications and at least one scheduled action indication are excavated for each ECDA region.

<b>G.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>G.01.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**G.01.b.** Verify that the operator's CDA plan for internal corrosion complies with all of the requirements contained in §192.927 (See Protocols D.6 ~ D.9) except that procedures for identifying locations for excavation may require excavation of only one high risk location in each ICDA region.[§192.931(c) and §192.925]

<b>G.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>G.01.b. Statement of Issue</b> (Leave blank if no issue was identified.)

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**G.01.c.** When using CDA carried out under §192.931(b) or (c), if an operator discovers any defect requiring remediation prior to the next scheduled assessment, verify that the operator evaluates the need to accelerate the schedule for the next assessment. If the schedule is accelerated, verify that the new assessment scheduled is determined using the methodology documented in NACE RP0502-2002, Section 6.2 and NACE RP0502-2002, Section 6.3. [§192.931(d)]

- i. If the defect requires immediate remediation, verify the operator reduces pressure consistent with §192.933 (See Protocol E) until the operator has completed reassessment using one of the assessment techniques allowed in §192.937 (See Protocol F). [§192.931(d)]

<b>G.01.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>G.01.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>G.01 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
II. Pipeline Integrity Management Plan Section M	2	6/2009	#3 Continuing Evaluation and Reassessment Plan
Appendix H	2	9/2009	External Corrosion Direct Assessment (ECDA)

<b>G.01 Inspection Notes</b>
G.01. a-b – Review of inspections completed in 2010-2011 indicate Ameren is performing Direct Assessment as required by B31.8S. The IM plan has procedures in place if to utilize for the CDA process.
G.01.c – Ameren identified no indications during the surveys performed in 2010-2011 that required remediation such as pressure reductions or piping replacements. No indications of corrosion resulting in wall loss were identified.

## Protocol Area H. Preventive and Mitigative Measures

- [H.01](#) General Requirements (Identification of Additional Measures)
- [H.02](#) Third Party Damage
- [H.03](#) Pipelines Operating Below 30% SMYS
- [H.04](#) Plastic Transmission Pipeline
- [H.05](#) Outside Force Damage
- [H.06](#) Corrosion
- [H.07](#) Automatic Shut-Off Valves or Remote Control Valves
- [H.08](#) General Requirements (Implementation of Additional Measures)
- [Table of Contents](#)

### ***H.01 General Requirements (Identification of Additional Measures)***

Verify that a process is in place to identify additional measures to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area. [§ 192.935(a)]

**H.01.a.** Verify that the process for identifying additional measures is based on identified threats to each pipeline segment and the risk analysis required by § 192.917. [Note: Protocol H.08 addresses the implementation decision process for additional preventive and mitigative measures.] [§ 192.935(a)]

<b>H.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.01.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**H.01.b.** Verify that additional measures evaluated by the operator cover a spectrum of alternatives such as, but not limited to, installing Automatic Shut-off Valves or Remote Control Valves, installing computerized monitoring and leak detection systems, replacing pipe segments with pipe of heavier wall thickness, providing additional training to personnel on response procedures, conducting drills with local emergency responders and implementing additional inspection and maintenance programs. [§ 192.935(a)]

<b>H.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.01.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>H.01 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
II. Pipeline Integrity Management Plan Section N	2	6/2009	#5 Additional Preventative and Mitigative Measures pages 26-27

<b>H.01 Inspection Notes</b>
H.01.a-b – Ameren has implemented and increased the number of personnel in their Watch and Protect program to attempt to prevent damage to transmission facilities. Ameren has no established that installing remote or automatic shutoff valves will enhance safety. They are monitoring the current proceedings regarding the installation of automatic or remotely operated valves currently being reviewed by PHMSA and will reevaluate after PHMSA has completed their evaluation and made any rulings.

## ***H.02 Third Party Damage***

Verify that the following preventive and mitigative requirements regarding threats due to third party damage have been addressed: [§192.935(b)(1) and §192.935(e)]

**H.02.a.** Verify implementation of enhancements to the §192.614-required Damage Prevention Program with respect to covered segments to prevent and minimize the consequences of a release, and that the enhanced measures include, at a minimum: [Note: As noted in Protocol H.03 and Protocol H.04, a subset of these enhancements are required for pipelines operating below 30% SMYS and for plastic transmission pipelines.] [§192.935(b)(1)]

- i. Using qualified personnel (see Protocol L.02 - §192.915(c)) for work an operator is conducting that could adversely affect the integrity of a covered segment, such as marking, locating, and direct supervision of known excavation work. [§192.935(b)(1)(i)]
- ii. Collecting, in a central database, location-specific information on excavation damage that occurs in covered and non covered segments in the transmission system and the root cause analysis to support identification of targeted additional preventative and mitigative measures in the high consequence areas. This information must include recognized damage that is not required to be reported as an incident under Part 191. [§192.935(b)(1)(ii)]
- iii. Participating in one-call systems in locations where covered segments are present. [§192.935(b)(1)(iii)]
- iv. Monitoring of excavations conducted on covered pipeline segments by pipeline personnel. [§192.935(b)(1)(iv)]
  1. When there is physical evidence of encroachment involving excavation that the operator did not monitor near a covered segment, verify that the area near the encroachment must be excavated or that an above ground survey using methods defined in NACE RP0502-2002 must be conducted. [§192.935(b)(1)(iv)]
    - A. If an above ground survey is conducted, verify that any indication of coating holidays or discontinuities warranting direct examination must be excavated and remediated in accordance with ASME B31.8S-2004, Section 7.5 and §192.933. [§192.935(b)(1)(iv)]

<b>H.02.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.02.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**H.02.b.** If the threat of third party damage is identified by results of the §192.917(b) (Protocol C.02) and ASME B31.8S-2004, Appendix A7 data integration processes, verify that comprehensive additional preventive measures are implemented. [§192.917(e)(1)]

<b>H.02.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)



<b>H.02.b. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>H.02 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
Appendix B	2	9/2009	Risk analysis process "Damage Prevention"
V. Quality Control	2	9/2009	(c) Training
V. Quality Control	2	9/2009	Table 5 Operator Qualification

<p><b>H.02 Inspection Notes</b></p> <p>H.02 Ameren has implemented a Watch and Protect program and increased the number of personnel available to perform Watch and Protect measures on excavation that take place near transmission pipelines. Ameren currently still utilizes qualified contract locators for performing locates on transmission and storage facilities. The Watch and Protect personnel are under the direction of the Damage Prevention Group at Ameren located in Belleville, Illinois. Ameren Public Awareness Program director has also been focusing on agricultural tile contractors and has been active in these associations by speaking at regional and state meetings to increase the awareness of excavating near transmission facilities located in rural areas and the requirements for requesting locates prior to excavating. Ameren has been an active participant at the farm progress show focusing on damage prevention when the show is held in Illinois.</p> <p>Ameren utilizes qualified personnel to perform locates on transmission facilities and participates in the state one call program known as JULIE.</p> <p>Ameren has adopted the following procedures regarding Watch and Protect at locations where excavations are taking place within 15 feet of a transmission line or a directional bore is crossing a DOT Transmission Line regardless of the % SMYS.</p> <p><u>7. Excavating Near a Transmission Main</u></p> <p>A. Ameren Illinois must take special precautions for Locate Requests in the vicinity of a Transmission main.</p> <p>B. When excavation on a Locate Request may be within fifteen (15) feet of a Transmission main, the Locator will notify Ameren Illinois of the pending excavation.</p> <p>C. The local Gas Supervisor or Ameren Illinois Representative will be notified of the locate request and excavation that could be near our gas transmission line and must verify the location of the excavation activities and monitor the excavation by taking the following actions as appropriate:</p> <p>(1) Where excavation activities are <u>within</u> fifteen (15) feet of a transmission main, gas field personnel shall monitor the excavation and document the excavation activities. All Monitoring documentation shall be maintained on the Monitoring Excavations SharePoint site. The location of the excavation and the condition of the main, if exposed, shall also be documented on the Pipe Examination - Transmission Main form.</p> <p>(2) Where excavation activities are <u>not within</u> fifteen (15) feet of a transmission main, gas field personnel shall document these findings and the documentation shall be maintained on the Monitoring Excavations SharePoint Site. No further action is required.</p> <p>D. When boring or trenchless technology is utilized to cross a DOT Transmission main, the gas field personnel must verify that the facilities are exposed at the crossing and monitor the actual crossing by the trenchless technology and pull back on the cable, main or duct to verify the operation does not damage the main or pipe coating. A Pipe Examination - Transmission Main form shall be filled out for all boring or trenchless technology activity within 15 feet of a transmission main.</p> <p>E. The Pipe Examination - Transmission Main form (SC 37-22-194) shall be forwarded to Pipeline Integrity (Mail Code D-47 (IP)).</p> <p>F. In addition to contacting Ameren Illinois when a Locate Request indicates excavation may be within fifteen (15) feet of a Transmission line the Locator will also contact the Excavator to inform them that a Gas Transmission Main is in the</p>
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**H.02 Inspection Notes**

vicinity and they may not proceed with any excavation within fifteen (15) feet of the Transmission main until they are contacted by the Gas Supervisor or Ameren Illinois Representative.

Ameren has also added multiple personnel to the Pipeline Integrity Section to improve the quality of the program and improve the record keeping process. Since the last inspection Ameren has added two engineers and they have a new supervisor for the program.

### ***H.03 Pipelines Operating Below 30% SMYS***

Verify that the following preventive and mitigative requirements for pipelines operating below 30% SMYS have been addressed: [§192.935(d)]

**H.03.a.** For pipelines operating below 30% SMYS located in a high consequence area:

- i. Verify that the operator's processes for damage prevention program enhancements include requirements for the use of qualified personnel (see Protocol L.02 - §192.915(c)) for work an operator is conducting that could adversely affect the integrity of a covered segment, such as marking, locating, and direct supervision of known excavation work. [§192.935(d) and §192.935(d)(1)] [Note: This requirement is also contained in Protocol H.02.a.i for pipelines operating above 30% SMYS.]
- ii. Verify that the operator's processes for damage prevention program enhancements include participating in one-call systems in locations where covered segments are present. [§192.935(d) and §192.935(d)(1)] [Note: This requirement is also contained in Protocol H.02.a.iii for pipelines operating above 30% SMYS.]
- iii. Verify that excavations near the pipeline are monitored, or patrols are conducted of the pipeline at bi-monthly intervals as required by §192.705. [§192.935(d) and §192.935(d)(2)]
  1. If indications of unreported construction activity are found, verify that required follow up investigations are conducted to determine if mechanical damage has occurred. [§192.935(d)(2)]

<b>H.03.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

  

<b>H.03.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**H.03.b.** For pipelines operating below 30% SMYS located in a class 3 or 4 area but not in a high consequence area:

- i. Verify that the operator's processes for damage prevention program enhancements include requirements for the use of qualified personnel (see Protocol L.02 - §192.915(c)) for work an operator is conducting that could adversely affect the integrity of a covered segment, such as marking, locating, and direct supervision of known excavation work. [§192.935(d), §192.935(d)(1) and §192 Table E.II.1] [Note: This requirement is also contained in Protocol H.02.a.i for pipelines operating above 30% SMYS.]
- ii. Verify that the operator's processes for damage prevention program enhancements include participating in one-call systems in locations where covered segments are present. [§192.935(d), §192.935(d)(1) and §192 Table E.II.1] [Note: This requirement is also contained in Protocol H.02.a.iii for pipelines operating above 30% SMYS.]
- iii. Verify that excavations near the pipeline are monitored, or patrols are conducted of the pipeline at bi-monthly intervals as required by §192.705. [§192.935(d), §192.935(d)(2) and §192 Table E.II.1]

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1. If indications of unreported construction activity are found, verify that required follow up investigations are conducted to determine if mechanical damage has occurred. [§192.935(d)(2) and §192 Table E.II.1]
- iv. Verify that the operator performs semi-annual leak surveys (quarterly for unprotected pipelines or cathodically protected pipe where electrical surveys are impractical). [§192.935(d)(3) and §192 Table E.II.1]

<b>H.03.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.03.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>H.03 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
Ameren O&M		2011	Damage Prevention Requirements
II Pipeline Integrity Management Plan Section M	2	9/2009	3. Pipelines operating below 30% SMYS Pg. 22-23

<b>H.03 Inspection Notes</b>
<p>H.03.a – Ameren also utilizes qualified personnel to perform locates on transmission facilities and participates in the state one call program known as JULIE.</p> <p>Ameren has adopted the following procedures regarding Watch and Protect at locations where excavations are taking place within 15 feet of a transmission line or a directional bore is crossing a DOT Transmission Line regardless of the % SMYS.</p> <p><u>7. Excavating Near a Transmission Main</u></p> <p>A. Ameren Illinois must take special precautions for Locate Requests in the vicinity of a Transmission main.</p> <p>B. When excavation on a Locate Request may be within fifteen (15) feet of a Transmission main, the Locator will notify Ameren Illinois of the pending excavation.</p> <p>C. The local Gas Supervisor or Ameren Illinois Representative will be notified of the locate request and excavation that could be near our gas transmission line and must verify the location of the excavation activities and monitor the excavation by taking the following actions as appropriate:</p> <ol style="list-style-type: none"> <li>(1) Where excavation activities are <u>within</u> fifteen (15) feet of a transmission main, gas field personnel shall monitor the excavation and document the excavation activities. All Monitoring documentation shall be maintained on the Monitoring Excavations SharePoint site. The location of the excavation and the condition of the main, if exposed, shall also be documented on the Pipe Examination - Transmission Main form.</li> <li>(2) Where excavation activities are <u>not within</u> fifteen (15) feet of a transmission main, gas field personnel shall document these findings and the documentation shall be maintained on the Monitoring Excavations SharePoint Site. No further action is required.</li> </ol> <p>D. When boring or trenchless technology is utilized to cross a DOT Transmission main, the gas field personnel must verify that the facilities are exposed at the crossing and monitor the actual crossing by the trenchless technology and pull back on the cable, main or duct to verify the operation does not damage the main or pipe coating. A Pipe Examination - Transmission Main form shall be filled out for all boring or trenchless technology activity within 15 feet of a transmission main.</p> <p>E. The Pipe Examination - Transmission Main form (SC 37-22-194) shall be forwarded to Pipeline Integrity (Mail Code D-47 (IP)).</p> <p>F. In addition to contacting Ameren Illinois when a Locate Request indicates excavation may be within fifteen (15) feet of a</p>

**H.03 Inspection Notes**

Transmission line the Locator will also contact the Excavator to inform them that a Gas Transmission Main is in the vicinity and they may not proceed with any excavation within fifteen (15) feet of the Transmission main until they are contacted by the Gas Supervisor or Ameren Illinois Representative.

H.03b – Ameren has no transmission pipelines located in class four locations. There are class three locations and are covered by the Watch and Protect program.

### ***H.04 Plastic Transmission Pipeline***

For plastic transmission pipelines, verify that applicable third party damage requirements have been applied to covered segments of the pipeline. [§192.935(e)]

**H.04.a.** Verify that the operator's processes for damage prevention program enhancements include requirements for the use of qualified personnel (see Protocol L.02 - §192.915(c)) for work an operator is conducting that could adversely affect the integrity of a covered segment, such as marking, locating, and direct supervision of known excavation work. [§192.935(e)] [Note: This requirement is also contained in previous Protocol H.02.a.i for non-plastic pipelines operating above 30% SMYS.]

<b>H.04.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.04.a. Statement of Issue</b> (Leave blank if no issue was identified.)
Ameren does not currently have plastic pipe identified as transmission.

**H.04.b.** Verify that the operator's processes for damage prevention program enhancements include participating in one-call systems in locations where covered segments are present. [§192.935(e)] [Note: This requirement is also contained in Protocol H.02.a.iii for non-plastic pipelines operating above 30% SMYS.]

<b>H.04.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
<b>X</b>	Not Applicable (explain in summary)

<b>H.04.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**H.04.c.** Verify that the excavations on covered segments are monitored by pipeline personnel. [§192.935(e)] [Note: This requirement is also contained in Protocol H.02.a.iv for non-plastic pipelines operating above 30% SMYS.]

- i. When there is physical evidence of encroachment involving excavation that the operator did not monitor near a covered segment, verify that the area near the encroachment must be excavated or that an above ground survey using methods defined in NACE RP0502-2002 must be conducted. [§192.935(e)] [Note: This requirement is also contained in Protocol H.02.a.iv for non-plastic pipelines operating above 30% SMYS.]
  1. If an above ground survey is conducted, verify that any indication of coating holidays or discontinuities warranting direct examination must be excavated and remediated in accordance with ASME B31.8S-2004, Section 7.5 and §192.933.

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[§192.935(e)] [Note: This requirement is also contained in Protocol H.02.a.iv for non-plastic pipelines operating above 30% SMYS.]

<b>H.04.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
X	Not Applicable (explain in summary)

<b>H.04.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>H.04 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>

<b>H.04 Inspection Notes</b>
H.04.a-c – Ameren has no plastic pipelines classified as transmission. N/A

### *H.05 Outside Force Damage*

Verify that the operator adequately addresses threats due to outside force (e.g., earth movement, floods, unstable suspension bridge). [§192.935(b)(2)]

**H.05.a.** If the operator makes a determination that outside force (e.g., earth movement, floods, unstable suspension bridge) is a threat to the integrity of a covered segment (e.g., via Protocol C.01 activities), verify that measures have been taken to minimize the consequences to the covered segment. These measures include, but are not limited to, increasing the frequency of aerial, foot or other methods of patrols, adding external protection, reducing external stress, and relocating the line. [§ 192.935(b)(2)]

H.05.a. Inspection Results (Type an X in the applicable box below. Select only one.)	
X	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.05.a. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>H.05 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
II. Pipeline Integrity Management Plan Section N	2	6/2009	#3. Outside Forces Actions to be taken due to a threat.

H.05 Inspection Notes
<p>There have been no releases or failures due to outside forces. Ameren has identified in Oglesby, Illinois that subsidence has affected the X-True polyethylene coating and has resulted in disbonding that shields the steel piping from the cathodic protection. Ameren has increased the leak surveys in the area and have taken other actions as a result of these findings. This issue was identified during assessments performed prior to 2010-2011. The Illinois river crossings located at the Ameren Illinois Persimmon Street Office in Peoria, Illinois is having the MAOP of the segment reduced which lowers the percent of specified minimum yield strength (SMYS) to under 20% alleviating the requirement for inspection as it is no longer classified as transmission and will not be covered under this plan.</p>



## H.06 Corrosion

Verify that the operator takes required actions to address corrosion threats. [§192.917(e)(5)]

**H.06.a.** Verify that the operator makes a determination of whether or not corrosion exists on a covered pipeline segment that could adversely affect the integrity of the line (conditions specified in §192.933). [§192.917(e)(5)]

- i. If such corrosion is identified, then verify that:
  1. The corrosion is evaluated and remediated, as necessary, for all pipeline segments (both covered and non-covered) with similar material coating and environmental characteristics. [§192.917(e)(5)]
  2. A schedule is established for evaluating and remediating, as necessary, the similar segments consistent with the operator's established operating and maintenance procedures under Part 192 for testing and repair. [§192.917(e)(5)]

<b>H.06.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.06.a. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>H.06 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
II. Pipeline Integrity Management Plan - Section N	2	6/2009	1 (g) Performing pipeline repairs driven by assessments

<b>H.06 Inspection Notes</b>
No corrosion resulting in wall loss was observed during the inspections and excavations performed in 2010-2011. Ameren did identify areas of low potentials during the surveys and have initiated or corrected the findings. At the Hoffman Station on the Hoffman NGPL/Station to Ontonagon segment, the survey indicated low potentials that were less than -.850 volts and was corrected by installing bonds on piping within the Ameren station and installing a rectifier to the east of the station.

### ***H.07 Automatic Shut-Off Valves or Remote Control Valves***

Verify that the operator has a process to decide if automatic shut-off valves or remote control valves represent an efficient means of adding protection to potentially affected high consequence areas. [§192.935(c)]

**H.07.a.** Verify that an adequate risk analysis-based process is used to determine if an automatic shut-off valve or remote control valve should be added. [§192.935(c)]

- i. Verify that, as a minimum, the following factors were considered: [§192.935(c)]
  1. swiftness of leak detection and pipe shutdown capabilities
  2. the type of gas being transported
  3. operating pressure
  4. the rate of potential release
  5. pipeline profile
  6. the potential for ignition
  7. location of nearest response personnel

<b>H.07.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.07.a. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>H.07 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
II. Pipeline Integrity Management Plan - Section N	2	6/2009	#5 Defining the design of the system and reasoning for not utilizing remote operated or automatic operated valves on page 26.

<b>H.07 Inspection Notes</b>
Ameren states the emergency plan requires a positive response before a valve can be operated. This defined in #5 on page 26 of the plan.

### ***H.08 General Requirements (Implementation of Additional Measures)***

Verify that the operator has identified and implemented (or scheduled) additional measures beyond those already required by Part 192 to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area: [§192.935(a)]

**H.08.a.** Verify that a systematic, documented decision-making process is in place to decide which measures are to be implemented, involving input from relevant parts of the organization such as operations, maintenance, engineering, and corrosion control. [§192.935(a)]

<b>H.08.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.08.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**H.08.b.** Verify that the decision-making process considers both the likelihood and consequences of pipeline failures. [§192.935(a)]

<b>H.08.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.08.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**H.08.c.** Verify that additional measures are identified and documented and have actually been implemented, or scheduled for implementation. [§192.935(a)]

<b>H.08.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>H.08.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>H.08 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
Appendix B	2	9/2009	Risk Analysis Process on page 49-50

<b>H.08 Inspection Notes</b>
Ameren has implemented other measures due to the mine subsidence observed in Oglesby and replaced pipe in the Marion/Johnston City area due to findings of the initial assessment performed in the Marion area which identified reclaimed heavy wall pipe had been previously utilized when the system was initially installed and cannot be inspected using a pig.

## Protocol Area I. Performance Measures

- [I.01](#) General Performance Measures
- [I.02](#) Performance Measures Records Verification
- [I.03](#) Exceptional Performance Measurements
- [Table of Contents](#)

### ***I.01 General Performance Measures***

Inspect the operator's program to verify that, as a minimum, provisions exist for measuring integrity management program effectiveness in accordance with the four elements of ASME B31.8S-2004, Section 9.4 and each identified threat in ASME B31.8S-2004, Appendix A. [§192.945(a) and ASME B31.8S-2004, Section 12(b)(5)]

**I.01.a.** Verify that performance is measured semi-annually (completed through June 30th and December 31st of each year) for each of the following: [ASME B31.8S-2004, Section 9.4]

- Number of miles of pipeline inspected versus program requirements
- Number of immediate repairs completed as a result of the integrity management inspection program
- Number of scheduled repairs completed as a result of the integrity management program
- Number of leaks, failures and incidents (classified by cause).

<b>I.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>I.01.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**I.01.b.** Verify that performance is measured semi-annually in accordance with the threat-specific metrics of ASME B31.8S-2004, Appendix A (See ASME B31.8S-2004, Table 9 for a summary listing).

<b>I.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>I.01.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>I.01 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
DOT Annual Report		2011	Pipeline Integrity information reported in the Annual Transmission DOT Report

<b>I.01 Inspection Notes</b>
<p>No repairs were required to the pipeline due to the assessments other than the cathodic protection system revisions due to low potentials identified by the CIS. No piping in an HCA was replaced due to corrosion issues or damage determined through the assessments and piping inspections performed in 2010-2011.</p>

## ***I.02 Performance Measures Records Verification***

Inspect operator records to verify: [§ 192.945(a)]

**I.02.a** The four overall performance measures of ASME B31.8S-2004, Section 9.4 have been submitted to PHMSA on a semi-annual basis in accordance with § 192.951. Note: Initial report by August 31, 2004, semi-annual reports by February 28th (or 29th) and August 31st of each year thereafter. [§ 192.945(a)]

<b>I.02.a Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>I.02.a Statement of Issue</b> (Leave blank if no issue was identified.)

<b>I.02 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
VI. Performance Measures Section D	2	9/2009	Overall Performance Measures

<b>I.02 Inspection Notes</b>
<p>In 2010-2011 there was no occurrences within an HCA that resulted in a leak, failure or incident. There was an incident on a segment of transmission piping located outside of an HCA near Milton, Illinois in 2010. Ameren's 10 inch transmission line was damaged by a tile contractor who was excavating without submitting a request to JULIE as defined by State Law. No injuries occurred due to the incident and there was no ignition. Lost gas was the reason for the high cost of the repairs and made it a reportable incident. Ameren allowed the damaged pipeline to leak until a stopper fitting could be installed to the north end of the point of damage to allow for a small town to retain gas service. The next shutoff valve located to the north of the damage would have isolated the supply to this town if utilized to control the flow of gas from the north. No property or persons was endangered due to the continued release of gas. The Ameren transmission group is currently reviewing the recommendations made by Staff as a result of our investigation.</p>

### ***I.03 Exceptional Performance Measurements***

For operators that choose to demonstrate exceptional performance in order to deviate from certain requirements of the rule, verify the following.

**I.03.a.** Additional performance measures beyond those required in §192.945 (see Protocol I.01) are part of the operator's performance plan. [§192.913(b)(vii)]

<b>I.03.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>I.03.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**I.03.b.** All performance measures (all measures required by §192.945 and the additional performance measures) are submitted to PHMSA on a semi-annual frequency in accordance with §192.951. [§192.913(b)(vii)]

<b>I.03.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>I.03.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>I.03 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
		2011	DOT Annual Report with IM information

<b>I.03 Inspection Notes</b>
I.03 Ameren has reported their performance to PHMSA as required.          





<b>J.01 Inspection Notes</b>

## Protocol Area K. Management of Change (MOC)

- [K.01](#) Documentation and Notification of Changes to the Integrity Management Program
- [K.02](#) Attributes of the Change Process
- [Table of Contents](#)

### ***K.01 Documentation and Notification of Changes to the Integrity Management Program***

Verify that changes to the integrity management program have been handled in accordance with § 192.909 of the rule.

**K.01.a.** Verify that the reasons for program changes have been documented prior to implementation of the change(s). [§ 192.909(a)]

<b>K.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>K.01.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**K.01.b.** Verify, that for significant changes to the program, program implementation, or schedules, PHMSA or the State or local pipeline safety authority, if applicable, has been notified within 30 days after the operator has adopted the change. [§ 192.909(b)]

<b>K.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
	No Issues Identified
	Potential Issues Identified (explain in summary)
<b>X</b>	Not Applicable (explain in summary)

<b>K.01.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>K.01 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
		2010-2011	Plan Revision Log

<b>K.01 Inspection Notes</b>
K.01.b - There were no significant changes to the plan in 2010-2011.

### ***K.02 Attributes of the Change Process***

Verify that the integrity management program meets the requirements of ASME B31.8S-2004, Section 11 for a management of change process. [§192.911(k)]

**K.02.a.** Verify the existence of procedures that consider impacts of changes to pipeline systems and their integrity. [ASME B31.8S-2004, Section 11(a)]

<b>K.02.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>K.02.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**K.02.b.** Verify change procedures address technical, physical, procedural, and organizational changes. [ASME B31.8S-2004, Section 11(a)]

<b>K.02.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>K.02.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**K.02.c.** Verify the following are provided for by the change procedures: [ASME B31.8S-2004, Section 11(a)]

- i. Reason for change
- ii. Authority for approving changes
- iii. Analysis of implications
- iv. Acquisition of required work permits
- v. Documentation
- vi. Communication of the change to affected parties
- vii. Time limitations
- viii. Qualification of staff

<b>K.02.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>K.02.c. Statement of Issue</b> (Leave blank if no issue was identified.)

**K.02.d.** Verify that integrity management system changes are properly reflected in the pipeline system and that pipeline system changes are properly reflected in the integrity management program. [ASME B31.8S-2004, Section 11(b)]

<b>K.02.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>K.02.d. Statement of Issue</b> (Leave blank if no issue was identified.)

**K.02.e.** Verify that equipment or system changes have been identified and reviewed before implementation. [ASME B31.8S-2004, Section 11(d)]

<b>K.02.e. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>K.02.e. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>K.02 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
IV Change Management Plan Section A	2	6/2009	3. Formal Procedures for Changing the plan
IV Change Management Plan Section A	2	6/2009	5. Documentation and Communications

<b>K.02 Inspection Notes</b>
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<b>K.02 Inspection Notes</b>
There were no major changes to the plan in 2010-2011 as the new supervisor took over in late 2010.

## Protocol Area L. Quality Assurance

- [L.01](#) Program Requirements for the Quality Assurance Process
- [L.02](#) Personnel Qualification and Training Requirements
- [L.03](#) Invoking Non-Mandatory Statements in Standards
- [Table of Contents](#)

### ***L.01 Program Requirements for the Quality Assurance Process***

Verify that a quality assurance process exists that meets the requirements of ASME B31.8S-2004, Section 12. [§192.911(l)]

**L.01.a.** Verify that responsibilities and authorities for the integrity management program have been formally defined. [ASME B31.8S-2004, Section 12.2(b)(2)]

<b>L.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

**L.01.a. Statement of Issue** (Leave blank if no issue was identified.)

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**L.01.b.** Verify that reviews of the integrity management program and the quality assurance program have been specified to be performed on regular intervals, making recommendations for improvement. [ASME B31.8S-2004, Section 12.2(b)(3)]

<b>L.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

**L.01.b. Statement of Issue** (Leave blank if no issue was identified.)

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**L.01.c.** Verify that corrective actions to improve the integrity management program and the quality assurance process have been documented and are monitored for effectiveness. [ASME B31.8S-2004, Section 12.2(b)(7)]

<b>L.01.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

**L.01.c. Statement of Issue** (Leave blank if no issue was identified.)

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**L.01.d.** Verify that when an operator chooses to use outside resources to conduct any process that affects the quality of the integrity management program, the operator ensures the quality of such processes and documents them within the quality program. [ASME B31.8S-2004, Section 12.2(c)]

<b>L.01.d. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

**L.01.d. Statement of Issue** (Leave blank if no issue was identified.)

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**L.01 Documents Reviewed** (Tab from bottom-right cell to add additional rows.)

Document Number	Rev	Date	Document Title
V. Quality Control Plan Section A	2	9/2009	General
V. Quality Control Plan Section B.	2	9/2009	Auditing
V. Quality Control Plan Section C.	2	9/2009	Training

**L.01 Inspection Notes**

Ameren is performing the required reviews and audits to ensure the program is being implemented as required.

## ***L.02 Personnel Qualification and Training Requirements***

Verify that personnel involved in the integrity management program are qualified for their assigned responsibilities. [§192.911(l), §192.915 and ASME B31.8S-2004, Section 12(b)(4)]

**L.02.a.** Verify that the Integrity Management Program requires supervisory personnel to have the appropriate training or experience for their assigned responsibilities. [§192.915(a)]

<b>L.02.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>L.02.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**L.02.b.** Verify the qualification of personnel that carry out assessments and who evaluate assessment results. [§192.915(b)]

<b>L.02.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>L.02.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**L.02.c.** Verify the qualification of personnel who participate in implementing preventive and mitigative measures including: [§192.915(c)]

- i. Personnel who mark and locate buried structures.
- ii. Personnel who directly supervise excavation work.
- iii. Other personnel who participate in implementing preventive and mitigative measures as appropriate. [ASME B31.8S-2004, Section 12.2(b)(4)]

<b>L.02.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>L.02.c. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

**L.02.d.** Verify that the personnel who execute the activities within the integrity management program are competent and properly trained in accordance with the quality control plan. [ASME B31.8S-2004, Section 11(a)(8) and ASME B31.8S-2004, Section 12.2(b)(4)]

<b>L.02.d. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>L.02.d. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>L.02 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
Document Number	Rev	Date	Document Title
V. Quality Control Program	2	9/2009	Qualifications and training of Ameren personnel involved with Pipeline Integrity.
V. Quality Control Program	2	9/2009	Contractor personnel's qualifications

<b>L.02 Inspection Notes</b>
Staff reviewed the qualifications of the personnel working as contractors for Ameren. No issues were observed during the review.

### ***L.03 Invoking Non-Mandatory Statements in Standards***

Verify that non-mandatory requirements (e.g., "should" statements) from industry standards or other documents invoked by Subpart O (e.g., ASME B31.8S-2004 and NACE RP0502-2002) are addressed by one of the following approaches: [§192.7(a)]

**L.03.a.** Incorporated into the operator's plan and implemented as recommended in the standard; or

<b>L.03.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>L.03.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**L.03.b.** An equivalent alternative method for accomplishing the same objective is justified and implemented; or

<b>L.03.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>L.03.b. Statement of Issue</b> (Leave blank if no issue was identified.)

**L.03.c.** A documented justification is included in the plan that demonstrates the technical basis for not implementing recommendations from standards or other documents invoked by Subpart O.

<b>L.03.c. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>L.03.c. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>L.03 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
I. General	2	9/2009	Records and Program Development

<b>L.03 Inspection Notes</b>
<p>The plan defines on page 4 that the required references have been incorporated into the writing and implementation of the plan.</p>

## Protocol Area M. Communications Plan

- [M.01](#) External and Internal Communication Requirements
- [M.02](#) Addressing Safety Concerns
- [Table of Contents](#)

### *M.01 External and Internal Communication Requirements*

Verify that an integrity management communication plan exists that meets the requirements of ASME B31.8S-2004, Section 10. [§192.911(m)]

**M.01.a.** Verify that the operator has submitted its API-1162 external communications plan to the PHMSA clearinghouse for approval.

<b>M.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>M.01.a. Statement of Issue</b> (Leave blank if no issue was identified.)

**M.01.b.** Verify provisions for operator internal organizational communication exist to establish understanding of and support for the integrity management program. [ASME B31.8S-2004, Section 10.3]

<b>M.01.b. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>M.01.b. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>M.01 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
III. Communication Plan	2	9/2009	Communication Plan

<b>M.01 Inspection Notes</b>
<p>M.01.a - Ameren has submitted the PA plan to PHMSA for review.</p> <p>M.01.b – Staffs review of job site briefings, communications plan procedures indicate the contractors were being required to follow the plan requirements through good communication.</p>

## ***M.02 Addressing Safety Concerns***

Verify that provisions exist to address safety concerns raised by:

**M.02.a.** PHMSA and State or local pipeline safety authorities (when a covered segment is located in a State where PHMSA has an interstate agreement). [§192.911(m)(1) and §192.911(m)(2)].

<b>M.02.a. Inspection Results</b> <i>(Type an X in the applicable box below. Select only one.)</i>	
<b>X</b>	No Issues Identified
	Potential Issues Identified <i>(explain in summary)</i>
	Not Applicable <i>(explain in summary)</i>

<b>M.02.a. Statement of Issue</b> <i>(Leave blank if no issue was identified.)</i>

<b>M.02 Documents Reviewed</b> <i>(Tab from bottom-right cell to add additional rows.)</i>			
<b>Document Number</b>	<b>Rev</b>	<b>Date</b>	<b>Document Title</b>
<b>I. General</b>			Environmental and Safety
		2010-2011	Job site Briefings

<b>M.02 Inspection Notes</b>
<p>Staff's review of safety related items completed as part of a job packet indicate Safety and the Environment are being incorporated into the plan and during the work performed during an assessment. Staff has observed the Safety measures implemented during job site inspections performed by Staff during 2010, 2011 and 2012. Shoring is utilized to protect the employees that enter the excavation against cave in and possible entrapment, coating is being collected after being removed during pipe inspections for proper disposal due to the possibility of having asbestos. Workers are being provided the proper safety equipment such as hard hats, face shields, masks and gloves. Each day a job site briefing is held to discuss the possible factors that could jeopardize their safety before beginning work. Any individual that is present on the job site is required to review and sign that they acknowledge being informed of the safety precautions and shall follow the applicable safety procedures.</p>



## Protocol Area N. Submittal of Program Documents

- [N.01](#) Integrity Management Program Document Submittal
- [Table of Contents](#)

### *N.01 Integrity Management Program Document Submittal*

Verify that the operator includes provisions in its program to submit, upon request, the operator's risk analysis or integrity management program to: [§192.911(n)]

**N.01.a.** PHMSA and State or local pipeline safety authorities, as applicable. [§192.911(n)]

<b>N.01.a. Inspection Results</b> (Type an X in the applicable box below. Select only one.)	
<b>X</b>	No Issues Identified
	Potential Issues Identified (explain in summary)
	Not Applicable (explain in summary)

<b>N.01.a. Statement of Issue</b> (Leave blank if no issue was identified.)

<b>N.01 Documents Reviewed</b> (Tab from bottom-right cell to add additional rows.)			
Document Number	Rev	Date	Document Title
		2010-2011	PHMSA Annual Transmission Reports

<b>N.01 Inspection Notes</b>
Ameren has submitted the required notifications to PHMSA and the State in 2010-2011.

**Additional Notes**